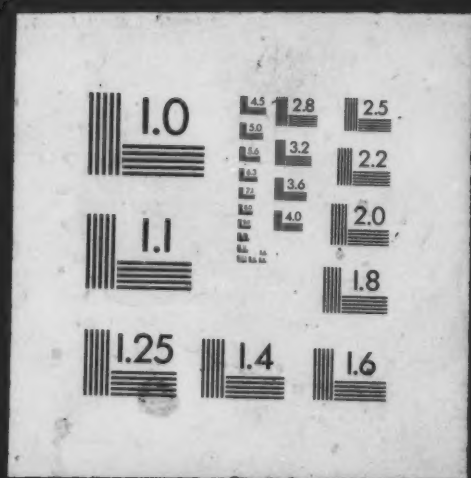


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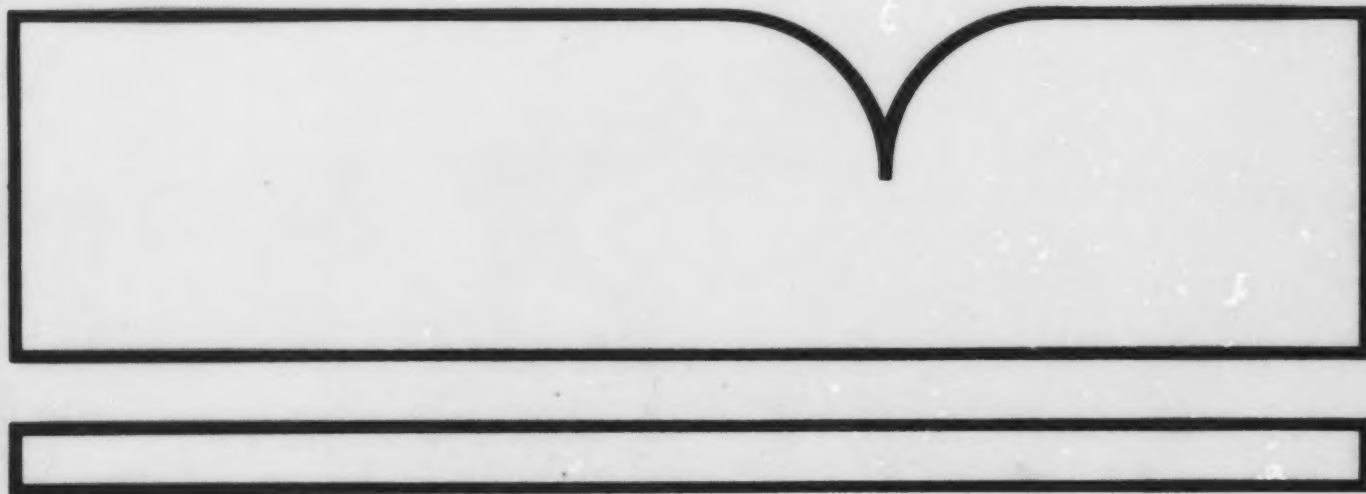


PB88-131362

Guidance for the Reregistration of
Pesticide Products Containing
Acephate as the Active Ingredient

(U.S.) Environmental Protection Agency
Washington, DC

Sep 87



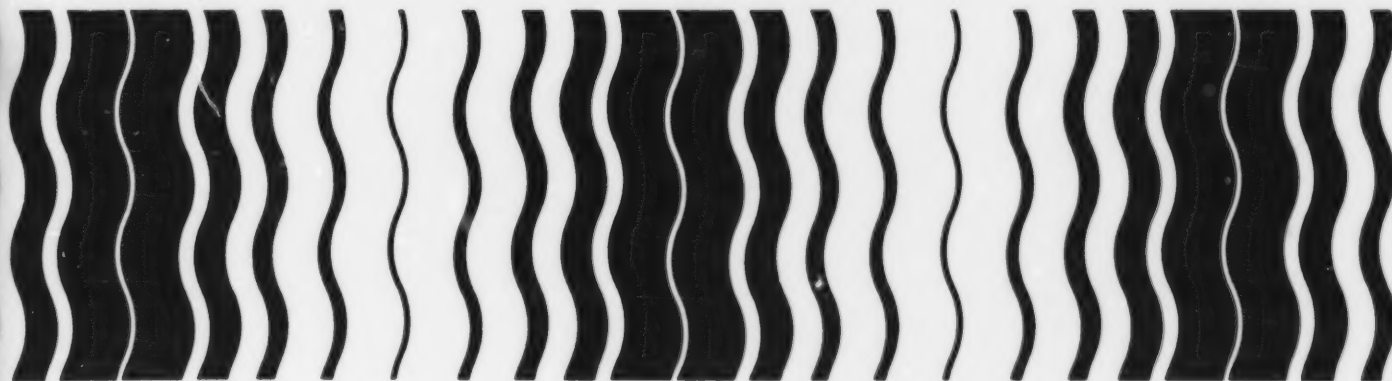
U.S. Department of Commerce
National Technical Information Service

NTIS

Pesticides



Guidance for the Reregistration of Pesticide Products Containing ACEPHATE as the Active Ingredient



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NATIONAL TECHNICAL
INFORMATION SERVICE
SPRINGFIELD, VA. 22161

REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3. Recipient's Accession No. PB88 131362/AS
4. Title and Subtitle Guidance for the Registration of Pesticide Products Containing ACEPHATE as the Active Ingredient			5. Report Date September 1987
7. Author(s) EPA, Office of Pesticide Programs, Registration Division			8. Performing Organization Rept. No. 540/RS-88-017
9. Performing Organization Name and Address U.S. Environmental Protection Agency Office of Pesticide Programs Registration Division TS-767C 401 M Street, SW Washington, D.C. 20460			10. Project/Task/Work Unit No.
12. Sponsoring Organization Name and Address Same as #9			11. Contract(G) or Grant(G) No. (C) (G)
15. Supplementary Notes			13. Type of Report & Period Covered
16. Abstract (Limit: 200 words) This document contains information regarding the registration of pesticide products containing the subject active ingredient. The document includes how to register under a registration standard, regulatory position and rationale, and summaries of data requirements and data gaps. Also included is a bibliography containing citations of all studies reviewed by EPA in arriving at the positions and conclusions contained in the standard.			14.
17. Document Analysis a. Descriptors Pesticides, standards, regulations, manufacturing, chemistry, toxicology, residues, ecology, path of pollutants.			
b. Identifiers/Open-Ended Terms			
c. COSATI Field/Group			
18. Availability Statement: Publicly Available		19. Security Class (This Report) Unclassified	21. No. of Pages 462
		20. Security Class (This Page) Unclassified	22. Price PC38.95 / MF 6.95

GUIDANCE FOR THE
REREGISTRATION OF PESTICIDE PRODUCTS
CONTAINING
ACEPHATE
(103301)

AS THE ACTIVE INGREDIENT

Case Number 42

CAS NUMBER 30560-19-1

September 1987

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS
WASHINGTON, D.C. 20460

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I. INTRODUCTION

EPA has established the Registration Standards program in order to provide an orderly mechanism by which pesticide products containing the same active ingredient can be reviewed and standards set for compliance with FIFRA. The standards are applicable to reregistration and future applications for registration of products containing the same active ingredient. Each registrant of a product containing an active ingredient subject to this Standard who wishes to continue to sell or distribute that product must bring his product and labeling into compliance with FIFRA, as instructed by this Standard.

The Registration Standards program involves a thorough review of the scientific data base underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential hazards arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects; and to determine whether the pesticide meets the "no unreasonable adverse effects" criteria of FIFRA. In its review EPA identifies:

1. Studies that are acceptable to support the data requirements for the currently registered uses of the pesticide.
2. Additional studies necessary to support continued registration. The additional studies may not have been required when the product was initially registered or may be needed to replace studies that are now considered inadequate.
3. Labeling revisions needed to ensure that the product is not misbranded and that the labeling is adequate to protect man and the environment.

The detailed scientific review, which is not contained in this document, but is available upon request¹, focuses on the pesticide active ingredient. The scientific review primarily discusses the Agency's evaluation of and conclusions from available data in its files pertaining to the pesticide active ingredient. However, during the review of these data the Agency is also looking for potential hazards that may be associated with the end use products that contain the active ingredient. The Agency will apply the provisions of this Registration Standard to end use products if necessary to protect man and the environment.

¹The scientific reviews may be obtained from the Information Services Section, Program Management and Support Division (TS-757C), EPA, 401 M St., SW, Washington, D.C. 20460.

EPA's reassessment results in the development of a regulatory position, contained in this Registration Standard, on the pesticide and each of its registered uses. See Section IV - Regulatory Position and Rationale. Based on its regulatory position, the Agency may prescribe a variety of steps to be taken by registrants to maintain their registrations in compliance with FIFRA. These steps may include:

1. Submission of data in support of product registration;
2. Modification of product labels;
3. Modifications to the manufacturing process of the pesticide to reduce the levels of impurities or contaminants;
4. Restriction of the use of the pesticide to certified applicators or other specially trained individuals;
5. Modification of uses or formulation types; or
6. Specification of packaging limitations.

Failure to comply with these requirements may result in the issuance of a Notice of Intent to Cancel or a Notice of Intent to Suspend (in the case of failure to submit data).

In addition, in cases in which hazards to man or the environment are identified, the Agency may initiate a special review of the pesticide in accordance with 40 CFR Part 154 to examine in depth the risks and benefits of use of the pesticide. If the Agency determines that the risks of the pesticide's use outweigh the benefits of use, the Agency may propose additional regulatory actions, such as cancellation of uses of the pesticide which have been determined to cause unreasonable adverse effects on the environment.

EPA has authority under the Data Call-In (DCI) provisions of FIFRA sec. 3(c)(2)(B) to require that registrants submit data to answer our questions regarding the chemical, toxicological, and environmental characteristics and fate of a pesticide. This Registration Standard lists the data EPA believes are necessary to resolve our concerns about this pesticide. These data are listed in the Tables A, B, and C in Appendix I. Failure to comply with the DCI requirements enumerated in this Registration Standard may result in issuance by EPA of a Notice of Intent to Suspend the affected product registrations.

Registrants are reminded that FIFRA sec. 6(a)(2) requires them to submit factual information concerning possible unreasonable adverse effects of a pesticide at any time that they become aware of such information. Registrants should notify

the Agency of any information, including interim or preliminary results of studies, if those results suggest possible adverse effects on man or the environment. This requirement continues as long as the products are registered by the Agency.

II. CHEMICAL COVERED BY THIS STANDARD

A. Description of Chemical

Acephate is the American National Standards Institute (ANSI)-approved common name given to the chemical O,S-dimethyl acetylphosphoramidothioate. Other names include Orthene; Ortho 12,420; RE 12,420; and Ortran. Identifying characteristics and codes are as follows:

Empirical Formula: $C_4H_{10}NO_3PS$
Molecular Weight: 183.16
CAS Registry No.: 30560-19-1
ENT Registry No.: 27,822
Shaughnessy No.: 103301

Technical acephate is an off-white crystalline solid. It has a strong pungent mercaptan-type odor. Its solubility is high in water, good in polar organic solvents, and poor in aromatic solvents. It is stable at 21 °C but decomposes at its melting point (82-89 °C).

B. Use Profile

Chevron Chemical Company is the sole producer of acephate in the United States and markets its products under the trade name Orthene. There is one technical/manufacturing-use product (MP) (97%) registered and two formulation intermediate MPs (85 and 75%) registered. There are 23 products registered for use in the United States under section 3 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These include 18 single active ingredient (ai) formulations and 5 multiple ai formulations. On record as of March 13, 1985, there were 113 products containing acephate registered under FIFRA section 24(c).

Acephate is a systemic, organophosphate, broad spectrum insecticide registered for use on a variety of ornamentals (by both homeowner and commercial applicator); agricultural crops, forests, pasture and rangeland, lawns and turf, indoor use in both commercial (including food handling establishments) and residential buildings, and in greenhouses.

It is formulated into soluble concentrate solids, soluble concentrate liquids, granulars, pressurized liquids, and an 85% cartridge.

Methods of application include aerial, ground, injection into tree trunks (cartridge formulation); dip treatment for ornamentals [24(c) registration]; soil incorporated granular (ornamentals); and sprinklers.

C. Mode of Activity

As an organophosphate, acephate exerts its toxic action by inhibiting certain important enzymes of the nervous system (cholinesterase).

III. AGENCY ASSESSMENT

A. Science Findings

1. Toxicology

The following is a summary of scientific findings based on the available toxicology data.

a. Acute Effects

Technical acephate is of relatively low acute toxicity by the oral, dermal, and inhalation route (Toxicity Category III to IV). Acephate's primary mechanism of toxicity is cholinesterase inhibition and animal studies have shown that the chemical inhibits plasma erythrocyte and brain cholinesterase activity.

b. Irritation and Sensitization

An eye irritation study conducted with the registered 97% technical/MP formulation showed the product was a mild eye irritant (Toxicity Category III) in rabbits. Slight corneal opacity occurred in two rabbits during days 1 and 2, but none thereafter. Slight conjunctival irritation was not reversible in 7 days in one rabbit, but disappeared by day 14.

Results of a dermal irritation study on the 97% formulation showed that the product was not a dermal irritant to rabbits, and a dermal sensitization study on the formulation showed that it was not a dermal sensitizer to guinea pigs.

c. Chronic Feeding Studies

In a 28-month feeding/oncogenic study, 75 male and 75 female Sprague-Dawley rats were treated with 0, 5, 50, or 700 ppm of acephate in the diet. The effects of acephate administration in this study were judged to be related to cholinesterase inhibition. At 5.0 ppm, the lowest effect level (LEL), some inhibition of brain cholinesterase was still observed. Additional data are required for the determination of the no-observable-effect level (NOEL) for brain cholinesterase inhibition in the rat.

In a 2-year feeding study, four male and four female dogs were treated with 10, 30, or 100 ppm of acephate in the diet. The effects of acephate administration in this study were judged to be related to cholinesterase inhibition. The NOEL was determined to be 30.0 ppm (0.75 mg/kg) and the LEL was 100 ppm (2.5 mg/kg), based on the inhibition of brain, plasma, and erythrocyte cholinesterase activities.

d. Reproduction

In the available reproduction study, 12 male and 12 female Charles River rats were treated with 0, 50, 150, or 500 ppm of acephate in the diet for 15 to 18 weeks before they were mated. The treatment was continued through pregnancy and lactation.

Various reproductive effects (low pregnancy rate, high loss of total litters, high fetal losses, decreased size and weight of total litters, and decreased number of live fetuses) were observed at the lowest dose level tested, which was 50.0 ppm of technical acephate (93% acephate).

A rat reproduction study utilizing a lower dosage level than that used in the current study is required in order to determine a definite NOEL for reproductive effects and to enable the Agency to evaluate the potential risk of such effects on humans from exposure to acephate.

e. Developmental Effects

Two acceptable developmental toxicity studies are available to the Agency.

In a rat study, doses of 25, 50, 100, or 200 mg/kg of acephate were administered orally during days 6 through 15 of gestation. No indication of developmental toxicity was noted. In this study, therefore, the NOEL for developmental effects was greater than 200 mg/kg.

In a rabbit study, doses of 0, 1, 3, or 10 mg/kg of acephate were administered orally during days 6 through 27 of gestation. No indication of developmental toxicity was noted. In this study, therefore, the NOEL for developmental effects was greater than 10 mg/kg.

f. Mutagenicity

Acephate has been tested in a wide array of genotoxic assays. These include gene mutation assays, DNA repair assays, sister chromatid exchange assays, and structural chromosome aberration assays.

The available studies indicate that acephate can induce gene mutations, DNA repair, and sister chromatid exchanges (SCEs). However, in vivo studies did not indicate that these effects and structural chromosome aberrations are produced at a detectable level in an intact mammalian system.

g. Metabolism

Three acceptable rat metabolism studies are available. The studies show that acephate is excreted essentially unchanged in mammalian urine. The excretion is rapid and there is no accumulation of acephate in tissues. About 0.6 to 1.6 percent of the administered acephate can be converted to methamidophos by the intestinal microorganisms of the rat and can, therefore, be absorbed along with the intact acephate. However, most of that methamidophos is rapidly eliminated from the animals.

h. Neurotoxicity

In an acute delayed neurotoxicity study, 16 hens were administered a dose level of 785 mg/kg at day 0 (initial dosing) and at day 22 (redosing). In this study, no acute delayed neurotoxic effects were observed.

i. Oncogenicity

Two acceptable oncogenicity studies are available to the Agency.

In the 28-month combined chronic feeding/oncogenic rat study described above, an increased incidence of adrenal medullary neoplasms (pheochromocytomas) in the acephate-treated male rats when related to the concurrent controls were observed. The reported incidences for the 0, 5, 50, and 700 ppm levels were 2.7, 9.7, 15.5, and 12.2 percent, respectively. These incidences are within the ranges reported for the historical control male rats of the same strain, which varied from 0.9 to 20.3 percent. Therefore, Agency scientists have concluded that the rat study is not indicative of an oncogenic response to acephate.

In a 2-year oncogenic study, 75 male and female CD-1 strain mice were treated with 0, 50, 250, or 1000 ppm of acephate in the diet. The most important finding in this study was a statistically significant increase in the proportion of liver adenomas/carcinomas and hyperplastic nodules occurring only in the high dose (1000 ppm) females and only at the time of terminal sacrifice.

j. Methamidophos

Technical acephate contains 0.9 to 1.2% w/w of methamidophos. It is the cholinesterase-inhibiting metabolite of acephate and is also an insecticide in its own right.

The available acute toxicity studies conducted with this insecticide show that technical methamidophos is highly

toxic by the oral and dermal routes (Toxicity Category I). The eye and dermal irritation studies show the registered 73% technical product is a mild to moderate irritant to the skin and eyes. The insecticide did not show acute delayed neurotoxicity effects in hens.

Results of two oncogenicity studies indicate that methamidophos was not oncogenic in rats at dose levels of 2, 6, 18, and 54 ppm or in mice at dose levels of 1, 5, and 25 ppm.

Results of two teratogenicity studies indicate that the chemical is not teratogenic when administered orally to rabbits at dose levels of 0.1, 0.5, and 2.5 mg/kg or to rats at dose levels of 0, 0.03, 1.0, and 3.0 mg/kg.

Results of a recently reviewed 1-year dog study and a 2-year rat study show that brain cholinesterase inhibition, the effect of concern in these studies, was observed at the lowest dose tested, which was 2 ppm (0.05 mg/kg/day) in both studies.

The rat reproduction study and mutagenicity studies, which were required under the Methamidophos Registration Standard issued September 1982, remain as toxicity data gaps for the chemical.

k. Methylthioacetate (MTA)

Toxicological testing has been conducted on methylthioacetate (MTA), which occurs as an impurity in the current registered technical material.

Results of an acute dermal toxicity study with MTA on rabbits indicate irreversible diminution or absence of pupillary light reflex and blindness caused by gliosis, macrophage accumulation, malacia, and papilledema of the optic nerve, optic tract, and brain between the optic chiasm and the pituitary. The dose levels tested were 1500, 2000, 2500, and 3000 mg/kg (dermal dose applied to a gauze sponge). The clinical signs reported with an interim report of a second dermal study in rabbits showed no indication of blindness. None of the other available studies on MTA showed any clinical sign of blindness.

The available data suggest that MTA, despite its generally low acute toxicity, may pose a hazard to the optic tract and pituitary gland in rabbits and other mammals at low doses. Data were not provided to demonstrate a NOEL for lesions at these target organs. Since visual impairment is inherently difficult to diagnose in animals, it is possible that this effect occurred in other studies but was not detected. In addition, a mutagenic effect was seen in the mouse lymphoma assay in the activated system. Due to the insufficiency of the submitted data to explain the toxic and mutagenic potential of MTA, the Agency

requires that additional studies be performed.

These studies, which are identified in Table A include a 90-day dermal in rabbits, acute oral in rats and rabbits, acute inhalation, the final report of a second acute dermal in rabbits, and mutagenicity studies. The need for neurophysiological studies of the visual system is reserved pending receipt and evaluation of the aforementioned studies.

Results of the available toxicological studies conducted with MTA are summarized below.

- Acute Dermal - Rabbit: 1720 to 2820 mg/kg; Toxicity Category II to III. Clinical signs include irreversible absence/diminution of pupillary light reflex and apparent blindness.
- Acute Inhalation - Rat: 3.47 mg/L; Toxicity Category III.
- Skin Irritation - Rabbit: 2.6 Primary Irritation Score; Toxicity Category III.
- Skin Sensitization - Guinea Pig: nonsensitizing and nonirritating; dose level tested was 0.3 mL (0.3 g).
- Eye Irritation - Rabbit: Toxicity Category III; dose level tested was 0.1 mL of 95.5% MTA.
- Mutagenicity - Mouse Lymphoma Assay: mutagenic to lymphoma cells in the activated system but not in the nonactivated system; levels tested were 1 to 10,000 ug/mL (activated) and 10 to 5000 ug/mL (nonactivated).

2. Ecological Effects

The following is a summary of scientific findings based on the available data.

a. Avian Species

The available studies on the acute and subacute avian toxicity of acephate are adequate to characterize the chemical as moderately toxic on an acute basis and slightly toxic on a subacute basis. The acute toxicity values are 140 mg/kg for ring-necked pheasants and 234 mg/kg for mallard ducks. When fed in the diet, the subacute toxicity values are 1280 ppm for bobwhite quail and greater than 5000 ppm for mallard ducks.

Reproduction studies in mallard ducks and bobwhite quail indicate dietary NOELs between 5 and 20 ppm for mallard ducks and 20 and 80 ppm for bobwhite quail. In mallards, egg production was not affected. The number of surviving ducklings (monitored to age 14 days) was reduced 20 percent at the 20 and 80 ppm treatment levels. No effects were noted at the 5 ppm level. In bobwhite, egg production and chick survival were not affected at the 5 and 20 ppm treatment levels but were reduced significantly at the 80 ppm level. A basis for the observed reduction in reproductivity at the 80 ppm level is suggested in the 50 percent reduction of the brain acetylcholinesterase activity (AChE), which was observed at this level.

A number of avian population (field monitoring) studies have been conducted in acephate-treated forests and rangeland. Though no one study provides sufficient information to provide a risk assessment for these use sites, in the aggregate they are sufficient pending results of a residue monitoring study. These studies indicate that acephate treatments may result in local population reductions in some avian species as well as a high incidence of sublethal brain AChE inhibition but that effects are not excessive, long-lasting, or likely to diminish wildlife resources.

The available field studies are, however, not sufficient to support an avian risk assessment for all registered crop uses. A field residue monitoring study for the multiple-application, high-dose-rate field crop uses are required.

b. Methamidophos

Though the dietary toxicity of acephate is low, its metabolite, methamidophos, is highly toxic to avian species on a dietary basis, ranging from 1/2 ppm (bobwhite) to 92 ppm (Japanese quail). Available information suggests that methamidophos residues may be about 30 percent of the applied acephate-methamidophos complex. The field monitoring study requested for selected field crops treated with acephate includes the monitoring of methamidophos residues as well as acephate residues on avian food items. Additional field testing may be required pending submittal and evaluation of the residue monitoring studies.

The available field studies conducted with the pesticide methamidophos are not sufficient to enable the Agency to fully assess the risk to avian species from the registered uses of methamidophos. A field study to monitor methamidophos residues on avian food items in selected field crops and a full-scale actual field test of avian population in selected field crops treated with methamidophos are needed and have been required under the Methamidophos Registration Standard.

c. Aquatic Species

The data indicate that technical acephate is of low acute toxicity to aquatic species. The 96-hour acute toxicity to rainbow trout and bluegill sunfish are greater than 1000 ppm. The studies on aquatic invertebrates show values of greater than 100 ppm and greater than 1000 ppm for a 48-hour study on Gammarus and a 96-hour study on Chironomus, respectively. The available 48-hour studies on estuarine and marine organisms show values of 22.9 and 5.41 ppm for brown shrimp and Atlantic oyster embryo, respectively.

No further testing on aquatic organisms is required for the current registered uses of acephate.

d. Nontarget Insects

The available data are sufficient to characterize acephate as highly toxic to honey bees. The acute contact toxicity for honey bees is determined to be 1.2 ug per bee.

e. Endangered Species

It has been determined that the forests, range and pastureland, soybean, and cotton uses of acephate pose potential hazard to endangered species.

The Agency has developed endangered species labeling, which is required to appear on labeling for acephate products. This labeling was specified in PR Notices 87-4 and 87-5 issued May 1, 1987.

3. Environmental Fate

The following is a summary of scientific findings based on the available data.

The available degradation studies show that acephate is essentially stable to hydrolysis and photolysis. Soil photodegradation studies are needed to fully assess the degradation of acephate in the environment.

In aerobic and anaerobic soil metabolism studies, acephate was found to dissipate rapidly with half-lives of approximately 3 and 6 days, respectively. The major metabolite in these studies was CO₂, which is formed from the microbial metabolism of acephate. Anaerobic aquatic metabolism data are needed to fully assess the metabolism of acephate in the environment.

The available leaching data include a soil thin-layer chromatography (TLC) study and a soil column study. Results

that aged acephate residues (excluding acephate and its degradate, methamidophos) are immobile in sandy loam soil. Apparently most of the applied acephate and most of its degradate degrade further to immobile compounds within 20 days. An adsorption/desorption study is needed to fully assess the mobility of acephate in the environment.

In the field dissipation studies for forestry use, it was shown that levels of acephate declined rapidly to below detectable levels (< 0.01 - 0.02 ppm) within 2 months in forests treated with acephate at up to 2 pounds active ingredient per acre. Levels of methamidophos were generally less than 10 percent of the detected acephate levels.

The available accumulation studies show that residues of acephate do not bioaccumulate in the edible tissues or viscera of bluegill sunfish and that acephate residues do not accumulate in carrot plants rotated in acephate-treated soil. Data on leafy vegetable crops and small grains are needed to fully assess the accumulation of acephate in rotational crops under confined conditions.

Because the available studies show acephate is mobile in most soils, the potential for ground water contamination exists. Though the probability of contamination is limited based on study results showing the degradation of acephate and methamidophos residues in soil to immobile compounds, additional data including mobility, photodegradation, metabolism, and dissipation studies are needed to fully assess this potential.

4. Reentry

The available reentry data are limited and additional studies are required to assess the potential exposure to fieldworkers entering areas treated with acephate. The available dislodgeable residue studies on cotton show that residues of acephate decline rapidly from leaf surfaces with approximately half of the applied acephate dissipated within 24 hours following application. Dislodgeable residue data are needed for cauliflower as a representative crop and soil dissipation data are required for use on peanuts.

B. Preliminary Risk Assessment

The science findings have identified potential reproductive and oncogenicity effects concerns. The following is an assessment of these concerns based on available data.

1. Oncogenicity

Based on the available evidence, i.e., findings from

the mouse oncogenicity study and the mutagenicity assays, the Agency has classified the chemical as a category C carcinogen (a possible human carcinogen). The available assays indicate that acephate showed consistently positive responses in gene mutation assays, was active in about 50 percent of DNA repair assays, was very active in one SCE in Chinese hamster cell cultures, and was without response in in vivo assays. The mouse oncogenicity study showed a statistically significant increase in the proportion of liver adenomas/carcinomas and hyperplastic nodules occurring only in the high dose (1000 ppm) females and only at the time of terminal sacrifice. The EPA Guidelines for carcinogenic risk assessment (FR September 24, 1986) were followed for the evaluation and classification of the oncogenic effect of acephate. Following the guidance set forth in the EPA guidelines, the mouse oncogenic response was considered as "limited evidence." A meeting of the FIFRA Scientific Advisory Panel (SAP) was held on February 11 and 12, 1986 to review, among other items, the weight of evidence for the carcinogenic potential of acephate. The Panel agreed with the Agency's classification of acephate as a class C carcinogen, noting that the presence of positive genotoxic data was considered pivotal in placing acephate in group C. At this time the Agency is considering the impact of this concern in terms of potential human risk. To estimate this level of concern, the Agency is requiring exposure data and residue studies.

The Agency believes that, with the use of the protective clothing and the required labeling specified within this Standard, there will be no unreasonable adverse effects in the interim until exposure assessment data are received and reviewed. Based on consideration of the following points, the Agency believes that the weight of evidence that acephate is a human carcinogen is weak.

The cancer guidelines state that sufficient evidence of carcinogenicity may be shown by an increased incidence of malignant tumors or combined malignant and benign tumors in multiple species or strains. The guidelines say the mouse-liver tumor response could be considered as limited evidence of carcinogenicity when a number of factors such as the following are observed: The occurrence of tumors only in the highest dose group and/or only at the end of the study; no substantial dose-related increase in the proportion of tumors that are malignant; the occurrence of tumors that are predominantly benign; no dose-related shortening of the time to the appearance of tumors; negative or inconclusive results from a spectrum of short-term tests for mutagenic activity; and the occurrence of excess tumors only in a single sex.

In the case of acephate, the Agency considers the evidence of carcinogenicity for acephate as limited evidence. In the following paragraphs, each of these factors is discussed as it relates to the available information on acephate.

- The occurrence of tumors only in the highest dose group and/or only at the end of the study.

The statistically significant increase in the liver adenomas/carcinomas and hyperplastic nodules were observed in only the high dose (1000.0 ppm) females and only at the end of the study. At 52 weeks there was an interim sacrifice of 40 females. No tumors were diagnosed at this time. There is no evidence of life shortening due to hepatocellular carcinomas. The study was not designed to provide definitive information regarding the time at which tumors first occurred. Thus, it is not possible to draw any definitive conclusions regarding the timing of occurrence of the tumors. However, the incidence of tumors only in the high-dose females tends to support a classification of the acephate data as "limited evidence" of carcinogenicity.

- No substantial dose-related increase in the proportion of tumors that are malignant.

Though the tumors were predominately malignant in the high-dose females, the effect was observed only at the highest dose. Therefore, there is no observed dose-response relationship for the malignant tumors (carcinomas). However, the power of this and any other similar study does not usually allow a definitive conclusion on the absence of dose response.

- The occurrence of tumors that are predominately benign, showing no evidence of metastasis or invasion.

The ratio of percentage of carcinomas to adenomas in the high-dose females is 15.8 to 3.9 percent. This supports a conclusion that malignant tumors are the predominate tumors. Therefore, this information is supportive of a classification of "sufficient" for acephate.

- No dose-related shortening of the time to the appearance of tumors.

There was an interim sacrifice at 52 weeks of 40 females. No tumors were observed at this time. Tumors were observed only at the end of the study in

high-dose females. Thus, within the limitations of the study design, there does not appear to be evidence of a shortened time-to-tumor effect. However, as indicated above, the study was not designed to provide definitive information regarding the time at which tumors first occurred.

Recognizing these limitations, the Agency believes that the evidence is adequate to conclude that there probably was not a shortening of the time to the appearance of tumors. Therefore, this factor tends to support a classification of the acephate data as "limited evidence" of carcinogenicity.

- Negative or inconclusive results from a spectrum of short-term tests for mutagenic activity.

Acephate induces gene mutations, DNA repair, and SCEs. It was positive or weakly positive in eight gene mutation assays with activation and negative in two acceptable studies. It was positive in one acceptable DNA repair assay with activation and negative in two acceptable studies. It was positive in one acceptable SCE assay with activation. It has been negative in two acceptable in vivo studies. The overall conclusion is that acephate has a definitive effect in a number of mutagenic assays. The in vivo assays, which were without response, are generally regarded to be of lesser sensitivity. Nonetheless, these negative effects show that acephate is not a strong mutagenic agent under in vivo conditions, while moderately mutagenic in cellular systems (prokaryotes and eukaryotes). Therefore, this information is supportive of a classification of "sufficient evidence" of carcinogenicity for acephate.

- The occurrence of excess tumors only in a single sex.

The tumors occurred only in the female mice. Therefore, this supports a "limited evidence" of carcinogenicity classification for acephate.

- Other data:

The rat oncogenicity study showed an increased incidence of medullary neoplasms in the adrenal gland (pheochromocytomas) of the acephate-treated male rats when related to the concurrent controls.

The incidence of pheochromocytomas in the acephate-treated male rats, however, was within the ranges

reported for the historical control male rats of the same strain. Following extensive analysis, Agency scientists concluded that the rat study is not indicative of an oncogenic response to acephate.

- ° In addition, available studies on the metabolism of acephate by rats, dairy cattle, pigs and goats have shown that acephate is excreted essentially unchanged in mammalian urine. The excretion is rapid and there is no accumulation of acephate in tissues.

2. Reproductive Effects

The occurrence of the reproductive effects observed in the available rat reproduction study described in the preceding Science Findings raises a question of concern over the potential risk to humans resulting from exposure to acephate. Because the NOEL for reproductive effects could not be determined from the available study, a new study is needed to evaluate this potential risk.

However, it should be noted that the effects were seen only at levels that are substantially higher than that to which humans can reasonably be anticipated to be exposed, taking into account ample margins of safety. Therefore, these data do not trigger a special review.

3. Exposure Incidents

Based on data provided by California (the only State that enforces mandatory reporting of occupational pesticide incidents), there were 39 incidents reportedly attributable to acephate from 1982 through 1986. Of the 39 incidents, 25 were reported as systemic effects, 9 as eye injuries, and 5 as skin injuries. Most (25) incidents involved applicators or were due to exposure to acephate in a concentrated form. The presentation of information regarding these incidents is made with no reference as to whether the products were handled/used according to recommended label directions.

The California data demonstrate that systemic poisoning to users can result from exposure to acephate. The imposition of protective clothing requirements as set forth in this Standard will reduce the likelihood of exposure to users of acephate products.

C. Summary of Data Gaps

1. Toxicology

Acephate:

21-Day Inhalation - Rat;
Reproductive Effects;
Rat Feeding Study; and
Dermal Penetration Study.

MTA:

90-Day Dermal - Rabbit;
Acute Oral - Rat and Rabbit;
Acute Inhalation;
Acute Dermal - Rabbit (final report); and
Mutagenicity.

2. Residue Chemistry

Residue storage stability data for beans, celery,
cottonseed, grass, lettuce, eggs, milk, and animal
tissues;
Data on levels of residues in food prepared for
consumption for beans, soybeans, and milk;
Tobacco Residue Data; and
Dairy Cattle Feeding Study.

3. Environmental Safety - Avian Residue Monitoring.

4. Environmental Fate

Photodegradation on Soil;
Anaerobic Aquatic Metabolism;
Adsorption/Desorption;
Soil Dissipation Field Study;
Irrigated Crop (Cranberries);
Confined Rotational Crop; and
Spray Drift.

5. Exposure

Applicator (indoor and outdoor);
Indoor Inhabitants; and
Glove Permeability.

6. Benefits - Usage and Use-Related Exposure Data.

7. Reentry

Soil Dissipation (Peanuts); and

Foliar Dissipation (Cauliflower).

D. Tolerance Reassessment

The currently established tolerances for combined residues of acephate and its metabolite methamidophos, as currently established under 21 CFR 193.10, 21 CFR 561.20, and 40 CFR 180.108, are supported by the available data in or on the following commodities or processed products: beans (dry and succulent), Brussels sprouts, cauliflower, celery, cottonseed, cranberries, lettuce (head), mint hay, pasture and range grass and hay, peanuts, peanut hulls, peppers, soybeans, cottonseed meal and hulls, soybean meal, all foods exposed in food handling establishments, eggs, and the fat, meat, and meat byproducts of cattle, goats, hogs, horses, poultry, and sheep. The currently established tolerance for acephate residues in milk has been found likely to be exceeded if maximum levels of spent mint hay or grass hay are included in the dairy animal diet; refer to chapter IV for the Agency's position and rationale regarding this problem. Refer to Table 1 at the end of this chapter for the current tolerance levels for the United States, Mexico, and Codex.

Additional data are required to assess human exposure to acephate-treated tobacco (aerial application data). No crop group tolerances are appropriate at the present time due to lack of sufficient data within each group.

A change in the residue definition for acephate tolerances is to be initiated by the Agency. Refer to chapter IV for details of this change. Refer also to Table 2 at the end of this chapter for the tolerance changes reflecting this change in the residue definition.

1. Residue Data

The metabolism of acephate in plants and animals is adequately understood. Available data show that the residues in or on plants resulting from acephate use may be largely or wholly intact acephate and its metabolite methamidophos. Available animal metabolism data show that most of the radiolabeled material is rapidly eliminated from the body and that a majority of the material was excreted in the urine. Methamidophos is not the major metabolite in ruminants. About 80 percent of the radiolabeled material in the urine was associated with unchanged acephate, and less than 10 percent with the metabolite O,S-dimethylphosphorothioate. Most of the methamidophos formed is probably eliminated and excreted in the urine as O,S-dimethylphosphorothioate.

The available plant metabolism studies show that acephate residues are readily absorbed by the roots and trans-

located throughout the plant. Data show that acephate does not accumulate in carrot plants rotated in acephate-treated soil or in fish, daphnia, or diatoms.

2. Toxicology Data

Acephate's provisional acceptable daily intake (PADI) for cholinesterase inhibition effects is 0.0025 mg/kg/day based on the chronic rat feeding study with an LEL of 5.0 ppm (0.25 mg/kg/day) and using a safety factor of 100. This safety factor was used because the rat LEL of 5.0 ppm is based on cholinesterase activity in brain, plasma, and red blood cells. It is the Agency's current policy to use a safety factor of 10 since this activity is considered to be the more sensitive criterion. In the case of acephate, an additional tenfold uncertainty factor is necessary because a NOEL was not reached in the chronic rat feeding study and because a reproduction study with a NOEL is lacking. The maximum permissible intake (MPI) is 0.1500 mg/day for a 60 kg human. The theoretical maximum residue concentration (TMRC), based on relevant food factors and established tolerance is 0.007666 mg/kg/day for a 60 kg human with a 1.5 kg diet. This figure represents 255.52 percent of the PADI. Results of the new rat reproduction study may affect the current PADI for acephate, as well as results of the subchronic rat study, which is being requested for purposes of determining the NOEL for brain cholinesterase inhibition in the rat.

Exceeding the PADI does not necessarily represent an immediate hazard to the public. The actual levels of residues to which the public is exposed are likely to be considerably less than this theoretical maximum indicates for the following reasons:

a. Most treated crops have residue levels that are below the established tolerance level. In the case of acephate, six commodities (lettuce, celery, beans, soybean oil, meat, and milk), contribute about 90 percent (.41/.46 mg/day) of the TMRC. Of these, tolerances for lettuce (crisphead), celery, and beans are set at about two or three times the maximum levels observed in field trials. FDA surveillance records indicate that maximum residues observed for celery and lettuce were somewhat less than that in the field trials.

b. In the calculation of the TMRC for a pesticide, it is assumed that 100 percent of every crop for which a tolerance has been established is treated with the pesticide. Of the six commodities listed above, it is estimated that the domestic bean and soybean crops treated with acephate constitute a relatively small percentage of the total U.S. bean and soybean crops.

c. Processing or time to market often result in further reductions as does preparing food for consumption. Though additional residue data are needed to determine the fate of

residues of acephate and its metabolite, methamidophos, during the processing of various food commodities, the available data suggest that cooking and canning would be a potential route of dietary exposure reduction. For example, in two canned succulent bean samples, residues of acephate and methamidophos represented 12 to 58 percent and 34 to 65 percent, respectively, of the residues determined in/on the raw agricultural commodity.

Additional data consisting of residue studies on food prepared for consumption for the commodities beans, soybeans, and milk are being requested to better define the dietary exposure to residues of acephate from treated food items as consumed. Pending submittal and evaluation of these data, no new tolerances including temporary tolerances, will be considered for acephate or its metabolite methamidophos.*

*A restriction against the establishment of further tolerances for methamidophos was previously imposed under the Methamidophos Registration Standard issued September 30, 1982.

Table 1. Present Tolerances

The following tolerances for residues of acephate exist in the United States and Mexico, and several international maximum residue limits (MRLs) have been recommended by the Codex Alimentarius Commission (listed below). No acephate tolerances are in effect in Canada. Note that U.S. tolerances cover combined residues of acephate and its metabolite methamidophos and that Mexican tolerances (presumably) and Codex MRLs cover only acephate per se.

Commodity	Tolerances (ppm)		
	United States ^a	Mexico	International Codex ^b
Alfalfa	--	--	10
Beans (dry and succulent)	3(1.0)	3	--
Broccoli	--	10	5
Brussels sprouts	3(0.5)	--	5
Cabbage	--	8	5
Cattle (fat, meat, meat byproducts)	0.1	--	0.1
Cauliflower	2(0.5)	--	5
Celery	10(1.0)	10	--
Chili pepper	--	4	--
Citrus fruits	--	1	5
Corn	--	4	--
Cottonseed	2	8(FA) ^d	2
Cottonseed hulls	4	--	--
Cottonseed meal	8	--	--
Cranberries	0.5(0.1)	--	--
Eggs	0.1	--	0.1

Table 1. Present Tolerances (cont'd)

Commodity	Tolerances (ppm)		
	United States ^a	Mexico	International Codex ^b
Goats (fat, meat, meat byproducts)	0.1	--	--
Grapes	--	5	--
Grass	15	--	--
Grass hay	15	--	--
Hogs (fat, meat, meat byproducts)	0.1	--	0.1
Horses (fat, meat, meat byproducts)	0.1	--	--
Lettuce	10(1.0)	10	10
Melons	--	8	--
Milk	0.1	--	0.1
Mint hay	15(1.0)	--	--
Nuts	--	0.2	--
Peanuts	0.2	0.1	--
Peanut hulls	5	--	--
Peppers	4(1.0)	--	--
Potatoes	--	8	0.5
Poultry (fat, meat, meat byproducts)	0.1	--	0.1
Sheep (fat, meat, meat byproducts)	0.1	--	--

This table does not include the tolerance for acephate in/on macadamia nuts (0.5 ppm) which was established subsequent to completion of evaluation needed for this document. Acephate is not currently registered for use on macadamia nuts.

Table 1. Present Tolerances (cont'd)

<u>Commodity</u>	<u>Tolerances (ppm)</u>		
	<u>United States^a</u>	<u>Mexico</u>	<u>International Codex^b</u>
Soybeans	1	1	0.5
Soybean meal	4	--	--
Sugar beet, leaves	--	--	10
Sugar beet, roots	--	--	0.1
Tomatoes	--	4	5
Watermelons	--	5	--
Processed foods ^c	0.02(FA)	--	--

a/ Numbers represent combined residues of acephate and methamidophos, whereas numbers in parentheses represent the maximum residues (in ppm) of methamidophos.

b/ All Codex MRLs are Step 7.

c/ Due to treatment of food handling establishments.

d/ Unspecified whether seed, oil, meal, hulls, or any combination thereof.

Table 2. Tolerance Changes Reflecting the Recommended Change in Residue Definition

Commodity	Acephate*		Methamidophos	
	Established Tolerance (ppm) ^a	Recommended Tolerance (ppm) ^b	Established Tolerance (ppm) ^c	Recommended Tolerance (ppm) ^c
Beans (succulent and dry forms)	3(1)	3	---	1
Brussels sprouts	3(0.5)	3	1	1
Cauliflower	2(0.5)	2	1	1
Celery	10(1)	10	1	1
Cottonseed	2	2	0.1	0.5
Cranberries	0.5(0.1)	0.5	---	0.1
Eggs	0.1	0.1	---	0.01
Fat, meat, and meat byproducts ^d	0.1	0.1	---	0.01
Grass (pasture and range)	15	15	---	3
Grass hay	15	15	---	3
Lettuce (head)	10(1)	10	1e	1
Milk	0.1	0.1	---	0.05
Mint hay	15(1)	15	---	1
Peanuts	0.2	0.2	---	0.1
Peanut hulls	5	5	---	1.5
Peppers	4(1)	4	1f	1
Soybeans	1	1	---	0.2
Cottonseed hulls ^g	4	4	---	0.1
Cottonseed meal ^g	8	8	---	2.5
Soybean meal ^g	4	4	---	2
Processed food ^h	0.02	0.02	---	---

^a Expressed in terms of combined residues of acephate and methamidophos. If specified, limits of methamidophos are given parenthetically.

^b Expressed in terms of acephate per se only.

^c Expressed in terms of only methamidophos per se.

^d Included are cattle, goats, hogs, horses, poultry, and sheep.

^e The methamidophos tolerance covers all types of lettuce (head and leaf).

^f The methamidophos tolerance covers all types of peppers.

^g Feed additive tolerances in 21 CFR 561.20 (acephate) and recommendations for inclusion under 21 CFR 561.277 (methamidophos).

^h Food additive tolerance reflecting spot and crack and crevice treatment of food areas of food handling establishments (21 CFR 193.10). There is no expectation of methamidophos residues in such foods (residues were nondetectable, < 0.001 ppm, in all cases).

* This table does not include the tolerance of acephate in/on macadamia nuts (.05 ppm), which was established subsequent to completion of the evaluation needed for this Document. Acephate is not currently registered for use on macadamia nuts.

IV. REGULATORY POSITION AND RATIONALE

A. REGULATORY POSITIONS

Based on review and evaluation of all available data on acephate the Agency has made the following determinations:

1. The Agency will not place Acephate into Special Review at this time.

Rationale: Serious consideration was given to the initiation of a Special Review because of the potential human safety concern identified during the Standard review process. As noted, the Agency believes the weight of the evidence that acephate is a human carcinogen is limited. Further, it has been determined that a Special Review could not now be usefully conducted because of the gaps in important data, particularly exposure data. These data are necessary to enable the Agency to complete a risk assessment under the Special Review process and to make a determination regarding the registration status of acephate. Once these data are received the Agency will initiate an expedited review and evaluation of the data to determine if further regulatory action is necessary.

Therefore, because the Agency believes required measures will prevent unreasonable adverse effects in the interim until exposure data are received and reviewed, because the Agency considers that the weight of evidence that acephate is a human carcinogen is weak, because additional studies are needed to accurately determine the potential risk to humans and because the required time and resources do not justify a Special Review at this time, the Agency is not placing acephate into Special Review at this time.

2. In order to meet the statutory standard for continued registration, the Agency is requiring reentry data, and, in the interim, a 24-hour reentry interval for agricultural crops, commercially grown ornamentals, commercial or governmental forestry seed production and in greenhouses. This reentry interval is not required for the ready to use tree injection cartridge product.

Rationale: Additional data are needed for the Agency to accurately determine the potential exposure risk to field workers and to establish a definitive reentry interval. The limited residue data show that dislodgeable acephate residues decline rapidly from leaf surfaces with approximately half the applied acephate dissipated within 24 hours following application. Establishment of an interim reentry interval is based on the high likelihood of exposure to residues of acephate and its metabolite, methamidophos to workers who perform activities in the treated sites specified above. The 24 hour reentry interval is being imposed as an interim measure to reduce exposure pending submittal and evaluation of the required reentry data.

3. In order to meet the statutory standard for continued registration, the Agency is requiring the use of certain minimum protective clothing for manufacturing use products (MPs) and end-use products (EPs). The required labeling language is found in Section IV.D. of this document.

Rationale: The Agency believes that with the use of protective clothing, there will be no unreasonable adverse effects in the interim until exposure assessment data are received and reviewed.

The use of protective clothing including chemical resistant gloves, long-sleeved shirt, and long-legged pants, is being imposed for mixer/loaders and applicators as an interim measure to reduce exposure.

4. In order to meet the statutory standard for continued registration the Agency is requiring that the products registered for domestic use continue to bear the following restriction: Do not allow children or pets on treated surfaces until spray has dried.

Rationale: The Agency believes that with the use of this restriction there will be no unreasonable adverse effects in the interim until exposure assessment data are received and reviewed.

Studies of indoor exposure to inhabitants are required to accurately assess the postapplication risk to nonapplicators. The current registered methods of application of acephate in indoor domestic settings are limited to localized areas. These application methods are crack and crevice, spot spray and paint brush spot treatments of house plants by homeowners. Because these uses of acephate in indoor residential settings are considered a limited use pattern in that application is limited to selective specified surfaces and does not include general treatment (application to broad expanses of surfaces such as walls, floors), it is expected that the potential exposure to inhabitants would be minimal. The current registered acephate product labels for domestic use carry the following restriction: Do not allow children or pets on treated surfaces until spray has dried. This restriction will continue to appear on all such acephate products to reduce exposure until a fuller assessment of risk can be made.

5. To support continued registration of peppermint and spearmint uses, a use restriction prohibiting the feeding of spent mint hay to dairy animals must be added to the label. The required

labeling language is found in Section IV.D. of this document.

To support continued registration of range and pastureland, either a lower tolerance for grass and grass hay with appropriate supporting residue data must be proposed or a use restriction prohibiting the grazing and feeding of grass or grass hay to dairy animals must be added to the label. As another alternative, pregrazing and preharvest intervals longer than 21 days may be proposed for dairy animals with appropriate supporting residue data. Should the registrant elect to propose a lower tolerance or longer PHI, this use restriction must be added to the label as an interim measure pending submittal and evaluation of these data. The registrant must inform the Agency at the 90-day response due date whether he intends to generate the additional residue data for grass and grass hay.

Rationale: The available residue data indicate that the established tolerance level for acephate residues in milk is likely to be exceeded if maximum levels of spent mint hay grass, or grass hay are included in the dairy animal diet.

In determining the level of secondary residue likely to occur in meat, milk, poultry or eggs from ingestion of treated feed items, the proportion in the animals diet of the feed items bearing the residue must be taken into account, along with the tolerance level established for those feed items. Table II of the Residue Chemistry guidelines (Subdivision O) is used as a guide in determining the proportion of the diet of the various feed items. In the case of acephate, the amount of residues contributing to the animals diet from ingestion of acephate treated feed items, particularly spent mint hay grass, or grass hay is larger than was previously thought.

The label restrictions referenced above are being imposed to ensure that the tolerance level for acephate residues in milk is not exceeded.

6. The following revisions in 40 CFR 180.108, 21 CFR 561.20, 40 CFR 180.315, 21 CFR 561.277 and 21 CFR 193.10 are to

be initiated by the Agency.

40 CFR 180.108 and 21 CFR 561.20: The acephate tolerances currently established under these sections are to refer only to acephate per se, with references to sections 40 CFR 180.315 and 21 CFR 561.277 indicating that tolerances for the metabolite, methamidophos are also in effect.

40 CFR 180.315 and 21 CFR 561.277:

The methamidophos tolerances currently established under these sections are to be divided into parts (a) and (b) where (a) includes (1) tolerances reflecting use of methamidophos and (2) tolerances where both acephate and methamidophos formulations are used on the same crops, and (b) includes tolerances reflecting use of acephate formulations alone, i.e., residues of methamidophos resulting from the metabolism of acephate.

21 CFR 193.10: These food additive tolerances reflecting crack and crevice treatment in food handling facilities are to be expressed in terms of only acephate per se, i.e., based on available data, no residues of the metabolite methamidophos are expected to occur (less than 0.001 ppm) in or on these foods.

Such a change in the residue definition would require deletion of the paragraph (d)(8) of 40 CFR 180.3 which states that methamidophos residues may not exceed the higher of the two tolerances established for the use of acephate or methamidophos as a pesticide.

Rationale: The change in residue definition, i.e., to change the expression for acephate tolerances from combined residues of acephate and methamidophos to residues of acephate per se, would achieve compatibility with the maximum residue levels (MRLs) of the Codex Alimentarius Commission at least in terms of residue definition. This change would also result in the U.S. tolerances and the Codex MRLs for acephate being compatible for the following commodities: cottonseed, eggs, animal tissues, lettuce, and milk. Residue data indicate that a reduction in the soybean tolerance from 1ppm to the Codex MRL level of 5ppm is not supported.

Of the methamidophos tolerances altered or created due to the recommended change in residue definition, only those for residues in animal tissues are compatible with Codex MRLs. Based on the residue data, the tolerances recommended for methamidophos in or on cottonseed, milk, and soybeans cannot be reduced to the levels of the corresponding Codex MRLs. Although the recommended change in residue definition would result in "new" tolerances for methamidophos, these tolerances merely reflect the residue levels that are already present in or on the specified crops resulting from the metabolism of acephate.

7. The Agency will not establish any new food/feed additive regulations pursuant to Section 409 of the Federal Food, Drug and Cosmetic Act (FFDCA) and is deferring action on previously established food/feed additive regulations.

Rationale: The Delaney Clause in Section 409 of the FFDCA bars the establishment of food additive regulations for substances which induce cancer in man or test animals, with exceptions which may not apply here. The Agency is currently developing a position relative to the Delaney Clause and FIFRA. Once this policy has been established, the Agency will determine what action is required in relation to pesticides which have produced positive oncogenic responses in chronic animal studies.

8. The Agency will not consider any new uses of acephate that would result in an increase in the current exposure to humans or in exposure to segments of the population not previously exposed.

Rationale: Additional studies are needed to better define the potential dietary, applicator, and nonapplicator risk from the registered uses of acephate. These studies include residue studies; exposure and usage data; reentry data; groundwater data; a dermal penetration study; and a subchronic rat study for the determination of a NOEL for brain cholinesterase inhibition.

9. The Agency will not consider the establishment of any new tolerances, including temporary tolerances, for acephate until required studies are received and reviewed.

Rationale: Available data are not sufficient for the Agency to complete its assessment of the potential dietary risk to consumers of acephate treated food commodities. Data are needed to determine the fate of residues of acephate and its metabolite, methamidophos, during the processing of these commodities.

10. The Agency is requesting additional ground water data in order to evaluate the potential for ground water contamination. These studies include mobility, photodegradation, metabolism and dissipation data.

Rationale: Due to its mobility, acephate has the potential for groundwater contamination. Available studies are insufficient to assess this potential. Thus, additional data are required.

Available studies show that acephate is mobile in most soils but that aged acephate residues are immobile in sandy loam soil. Apparently most of the applied acephate and the degradate methamidophos degrade to immobile compounds within 20 days. Based on these studies, the probability of contamination is limited.

11. The Agency is requiring an avian residue monitoring study to support continued registration of the multiple-application, high dose rate field crop uses. The need for additional testing will depend on results of this monitoring study.

Rationale: Although the dietary toxicity of acephate to avian species is not considered high, its metabolite, methamidophos, has been shown to be very toxic to birds in dietary exposures. Available data on methamidophos residues occurring in avian feed items from application of acephate at 1 lb active ingredient per acre, suggest that residue levels of methamidophos may occur as high as 9% to 41% of the bobwhite acute dietary toxicity value. The avian residue monitoring data are required to estimate the actual field residue levels of methamidophos on avian food items resulting from application of acephate.

12. In separate notices (PR Notices 87-4 and 87-5), endangered species labeling has been required for uses of acephate in forests; range and pastureland; soybeans; and cotton. These notices were issued on May 1, 1987 and specify that the endangered species labeling restrictions apply to use of the affected products after February 1, 1988.

Rationale: The forests, range and pastureland, soybeans and cotton uses of acephate may pose potential hazard to endangered species. In order to protect endangered species in areas where acephate is used on these sites, the endangered species labeling as specified in PR Notice 87-4 (forestry use) and 87-5 (range and pastureland, soybeans and cotton) is required. Consultation with the U.S. Fish and Wildlife Service will be undertaken to determine whether other uses of acephate will jeopardize endangered species.

13. The Agency is requiring a rat reproduction study utilizing a lower dosage level than that used in the current rat reproduction study.

Rationale: Though the current study is considered a scientifically valid study, it does not fulfill the data requirement for a reproduction study in that a no-observable effect level (NOEL) was not determined.

As described previously, the current study showed reproductive effects at the lowest level tested. Therefore, a new rat reproduction is required in order to enable the Agency to evaluate the potential risk of such effects on humans from exposure to acephate.

14. Additional toxicological tests are required to be conducted on methylthioacetate (MTA) which occurs as an impurity in the current registered technical material.

Rationale: The available data suggest that MTA, despite its generally low acute toxicity, may pose a hazard to the optic tract and pituitary gland in rabbits and other mammals at low doses. Data were not provided to demonstrate a NOEL for lesions at these target organs. Since visual impairment is inherently difficult to diagnose in animals, it is possible that this effect occurred in other studies but was not detected. In addition, a mutagenic effect was seen in the mouse lymphoma assay in the activated system. Due to the insufficiency of the submitted data to explain the toxic and mutagenic potential of MTA, the Agency requires that additional studies be performed.

15. The Agency has identified certain data that will receive immediate review when submitted.

Rationale: Certain data are essential to the Agency's assessment of this pesticide and its uses and/or may trigger the need for further studies, which should be initiated as soon as possible. The following studies have been identified to receive priority review as soon as they are received by the Agency.

158.125 - Residue Chemistry

- 171-4 - Residue Storage Stability
- 171-4 - Magnitude of Residues
- 171-5 - Reduction of Residue

158.130 - Environmental Fate

- 164-1 - Field Dissipation - Soil
- 165-1 - Confined Rotational Crop

158.135 - Toxicology - Acephate

- 83-1 - Rat Feeding Study to Determine NOEL
- 83-4 - Rat Reproduction Study
- 85-2 - Dermal Penetration

158.135 - Toxicology - MTA

- 81-1 - Acute Oral - Rat and Rabbit
- 81-2 - Acute Dermal - Rat and Rabbit
- 81-3 - Acute Inhalation - Rat
- 82-3 - 90-Day Dermal - Rabbit

158.140 - Reentry

- 132-1 - Foliar Dissipation
- 132-1 - Soil Dissipation

158.142 - Spray Drift

- 201-1 - Droplet Size Spectrum
- 201-1 - Drift Field Evaluation

158.145 - Ecological Effects

- 70-1 - Special Test - Avian Food Residue and Enzyme Monitoring

Special Studies

- Exposure Assessment Studies
- Glove Permeability Study
- Use-Related Exposure
- Usage Data

16. While the required data are being developed, currently registered MPs and end-use products (EPs) containing acephate may be sold, distributed, formulated, and used subject to the terms and conditions specified in this Standard. Registrants must provide or agree to develop and provide additional data, as specified in the Data Appendixes, in order to maintain existing registrations.

Rationale: Under FIFRA, the Agency does not normally cancel or withhold registration simply because data are missing or are inadequate (see FIFRA section 3(c)(2)(B) and 3(c)(7)). Issuance of this Standard provides a mechanism for identifying data needs. These data will be reviewed and evaluated, after which the Agency will determine if additional regulatory changes are necessary.

B. Criteria for Registration

To be reregistered under this Standard, MPs must contain acephate as the sole active ingredient, bear required labeling, and conform to the product composition, acute toxicity limits, and use pattern requirements listed in this document.

C. Acceptable Ranges and Limits

1. Product Composition Standard

To be registered or reregistered under this Standard, MPs must contain acephate as the sole active ingredient. Each MP formulation proposed for registration must be fully described with an appropriate certification of limits, stating maximum and minimum amounts of the active ingredient and inert ingredients that are present in products, as well as impurities found at greater than 0.1%.

2. Acute Toxicity Limits

The Agency will consider registration of technical grade and MPs containing acephate provided that the product labeling bears appropriate precautionary statements for the acute toxicity category in which each product is placed.

3. Use Patterns

To be registered under this Standard, MPs containing acephate must be labeled for formulation into EPs only for the uses listed below. The EPA Index to Pesticide Chemicals lists all registered uses, as well as approved maximum application rates and frequencies.

- Terrestrial, nondomestic, food uses on cauliflower, Brussels sprouts, peanuts, peppermint, spearmint, pasture, rangeland, beans, celery, cotton, head lettuce, peppers, soybeans, cotton, and cranberries.
- Terrestrial, nondomestic nonfood uses on tobacco, forests; grasses and broadleaf weeds in nonbearing pistachio orchards [24(c) registration]; ornamentals (field grown and nursery stock); wasteland; and commercial turf.
- Domestic outdoor use on lawns, ornamentals, residential turf areas (parks and recreational areas), and as a perimeter treatment adjacent to and on the surfaces of buildings.
- Domestic indoor use on house plants; as a spot treatment in residential, industrial, institutional, and commercial buildings; and in transportation equipment.
- Nondomestic indoor use on ornamental and forest greenhouse plants.

D. Required Labeling

All products must bear appropriate labeling as specified in 40 CFR 162.10, PR Notices 83-2 and 83-3, and below. Appendix II contains information on label requirements.

Pesticide products containing acephate as an active ingredient may not be released for shipment by the registrant after September 30, 1988 unless the product bears amended labeling that complies with the requirement of this Standard.

Pesticide products containing acephate as an active ingredient may not be distributed, sold, offered for sale, held for sale, shipped, delivered for shipment, or received and (having been so received) delivered or offered to be delivered by any person after September 30, 1989 unless the product bears amended labeling which, approved by EPA, complies with the requirements of this Standard.

Ingredient Statement

The ingredient statement for all acephate products must list the active ingredient as:

Acephate (O,S-dimethyl acetylphosphor-
amidothioate) . . . %

1. Manufacturing-Use Products

In addition to the appropriate precautionary labeling designated in 40 CFR 162.10, the labels of all MPs must contain the following statements:

- For formulation into end-use insecticide products intended for [specify the appropriate use pattern/uses listed in section C.3.].
- Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the Environmental Protection Agency.
- When handling the product, wear chemical-resistant gloves, long-sleeved shirt, and long pants.

2. End-Use Product Labeling

a. The following protective clothing statements must appear on all products intended for use on agricultural crops, commercially grown ornamentals, commercial or governmental forestry seed crops, and in greenhouses and on all products intended for use by commercial applicators. These statements are not being required for the ready-to-use tree injection cartridge product.

USE ONLY WHEN WEARING THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT DURING MIXING/LOADING, APPLICATION, REPAIR, AND CLEANING OF MIXING, LOADING, AND APPLICATION EQUIPMENT, DISPOSAL OF THE PESTICIDE, AND [areas for which a reentry interval has been established] EARLY REENTRY INTO TREATED AREAS: chemical-resistant gloves, long sleeved shirt, long legged pants, shoes, and socks. If overhead exposure is likely, such as during flagging, wear a hood or wide-brimmed hat.

WORK SAFETY: Always wash hands, face, and arms with soap and water before smoking, eating, drinking or toileting. AFTER WORK: Before removing gloves, wash them with soap and water. Take off all work clothes and shoes. Shower using soap and water. Wear only clean clothes when leaving job--do not wear contaminated clothing. Personal and protective clothing worn during work must be laundered separately from household articles. Store protective clothing separately from personal clothing. Clean or launder protective clothing after each use.

b. The following protective measures must appear on products intended for homeowner use in and around the home (except for those to be used as a ready-to-use aerosol):

When handling this product wear chemical resistant gloves, long pants, and long sleeved shirt. When using outdoors spray with the wind to your back and do not use when wind speeds are 10 mph or more. Wash the outside of the gloves with soap and water before removing.

c. The following restriction must appear on acephate products labeled for domestic use:

Do not allow children or pets to come into contact with treated surfaces until sprays have dried.

d. The following reentry interval statement must appear on products intended for use on agricultural crops, commercially grown ornamentals, commercial or governmental forestry seed production, and in greenhouses with the exception of the ready to use cartridge product.

Reentry into treated areas is prohibited for 24 hours after the end of application unless the protective clothing specified elsewhere on this label is worn.

e. The following environmental hazard statements must appear on acephate products labeled for the specified uses:

1) Agricultural and Ornamental Uses

This pesticide is toxic to birds. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

2) Forest and Rangeland Use

This pesticide is toxic to birds. Applications may adversely affect birds in treatment areas. Do not apply directly to water or wetlands except under forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

3) Agricultural Crop Uses

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

f. Use Restriction Statements

1) Peppermint and Spearmint

Do not use spent mint hay for feed for dairy animals.

2) Pasture and Rangeland

Do not graze or feed grass or grass hay to dairy animals.

- g. Endangered species labeling statements are required on products intended for use on forests, range and pastureland, soybeans and cotton.

The statements, as required in PR Notices 87-4 and 87-5, issued May 1, 1987, must appear on labeling within the time frames specified in the notices.

V. PRODUCTS SUBJECT TO THIS STANDARD

All products containing one or more of the pesticides identified in Section II.A. are subject to certain requirements for data submission or changes in composition, labeling or packaging of the product. The applicable requirements depend on whether the product is a manufacturing or end use product and whether the pesticide is the sole active ingredient or one of multiple active ingredients.

Products are subject to this Registration Standard as follows:

A. Manufacturing use products containing this pesticide as the sole active ingredient are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section IV, if they pertain to the manufacturing use product.
2. The data requirements listed in Tables A and B²
3. The labeling requirements specified for manufacturing use products in Section IV.
4. Administrative requirements (application forms, Confidential Statement of Formula, data compensation provisions) associated with reregistration.

² Data requirements are listed in the three Tables in Appendix I of this Registration Standard. The Guide to Tables in that Appendix explains how to read the Tables.

Table A lists generic data requirements applicable to all products containing the pesticide subject to this Registration Standard. Table B lists product-specific data applicable to manufacturing use products. The data in Tables A and B need not be submitted by a producer who is eligible for the formulator's exemption for that active ingredient.

Table C lists product-specific data applicable to end use products. The Agency has decided that, in most cases, it will not require the submission of product-specific data for end use products at this time. Therefore most Registration Standards do not contain a Table C.

B. Manufacturing use products containing this pesticide as one of multiple active ingredients are subject to:

The data requirements listed in Table A.

C. End use products containing this pesticide as the sole active ingredient are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section IV if they pertain to the end use product.
2. If eligible for the formulator's exemption³, the data requirements listed in Table C.
3. If not eligible for the formulator's exemption, the data requirements listed in Table A and the data requirements listed in Table C.
4. The labeling requirements specified for end use products in Section IV.

D. End use products containing this pesticide as one of multiple active ingredients are subject to:

- a. If not eligible for the formulator's exemption, the data requirements listed in Tables A and C.
- b. If eligible for the formulator's exemption, the data requirements listed in Table C.

³ If you purchase from another producer and use as the source of your active ingredient only EPA-registered products, you are eligible for the formulator's exemption for generic data concerning that active ingredient (Table A) and product-specific data for the registered manufacturing use product you purchase (Table B).

Two circumstances nullify this exemption:

1) If you change sources of active ingredient to an unregistered product, formulate your own active ingredient, or acquire your active ingredient from a firm with ownership in common with yours, you individually lose the exemption and become subject to the data requirements in Table A.

2) If no producer subject to the generic data requirements in Table A agrees to submit the required data, all end use producers lose the exemption, and become subject to those data requirements.

VI. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

This portion of the Registration Standard is a notice issued under the authority of FIFRA sec. 3(c)(2)(B). It refers to the data listed in Table A, which are required to be submitted by registrants to maintain in effect the registration of products containing this active ingredient.⁴

A. What are generic data?

Generic data pertain to the properties or effects of a particular active ingredient. Such data are relevant to an evaluation of all products containing that active ingredient regardless of whether the product contains other ingredients (unless the product bears labeling that would make the data requirement inapplicable).

Generic data may also be data on a "typical formulation" of a product. "Typical formulation" testing is often required for ecological effects studies and applies to all products having that formulation type. These are classed as generic data, and are contained in Table A.

B. Who must submit generic data?

All current registrants are responsible for submitting generic data in response to a data request under FIFRA sec. 3(c)(2)(B) (DCI Notice). EPA has decided, however, not to require a registrant who qualifies for the formulator's exemption (FIFRA sec. 3(c)(2)(D) and § 152.85) to submit generic data in response to a DCI notice if the registrant who supplies the active ingredient in his product is complying with the data request.

If you are granted a generic data exemption, you rely on the efforts of other persons to provide the Agency with the required data. If the registrants who have committed to generate and submit the required data fail to take appropriate steps to meet the requirements or are no longer in compliance with this data requirements notice, the Agency will consider that both they and you are not in compliance and will normally initiate proceedings to suspend the registrations of both your product(s) and their product(s) unless you commit to submit and submit the required data in the specified timeframe. In such cases, the Agency generally will not grant a time extension for submitting the data.

⁴ Registrations granted after issuance of this Standard will be conditioned upon submission or citation of the data listed in this Registration Standard.

If you are not now eligible for a formulator's exemption, you may qualify for one if you change your source of supply to a registered source that does not share ownership in common with your firm. If you choose to change sources of supply, the Confidential Statement of Formula must identify the new source(s) and you must submit a Formulator's Exemption Statement form.

If you apply for a new registration for products containing this active ingredient after the issuance of this Registration Standard, you will be required to submit or cite generic data relevant to the uses of your product if, at the time the application is submitted, the data have been submitted to the Agency by current registrants. If the required data have not yet been submitted, any new registration will be conditioned upon the new registrant's submission or citation of the required data not later than the date upon which current registrants of similar products are required to provide such data. See FIFRA sec. 3(c)(7)(A). If you thereafter fail to comply with the condition of that registration to provide data, the registration may be cancelled (FIFRA sec. 6(e)).

C. What generic data must be submitted?

You may determine which generic data you must submit by consulting Table A. That table lists the generic data needed to evaluate current uses of all products containing this active ingredient, the uses for which such data are required, and the dates by which the data must be submitted to the Agency.

D. How to comply with DCI requirements.

Within 90 days of your receipt of this Registration Standard, you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1, enclosed) for each of your products. On that form you must state which of the following six methods you will use to comply with the DCI requirements:

1. You will submit the data yourself.

2. You have entered into an agreement with one or more registrants to jointly develop (or share in the cost of developing) the data, but will not be submitting the data yourself. If you use this method, you must state who will submit the data on which you will rely. You must also provide EPA with documentary evidence that an agreement has been formed which allows you to rely upon the data to be submitted. Such evidence may be: (1) your letter offering to join in an agreement and the other registrant's acceptance of your offer, (2) a written statement by the parties that an agreement exists, or (3) a written statement by the person who will be submitting the data that you may rely upon its submission.

The Agency will also require adequate assurance that the person whom you state will provide the data is taking appropriate steps to secure it. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or a mechanism to resolve the terms.

If you and other registrants together are generating or submitting requested data as a task force or consortium, a representative of the group should request a Joint Data Submitter Number from the Registration Support and Emergency Response Branch, Registration Division. The request must include the following information:

- a. A list of the members of the consortium;
- b. The name and address of the designated representative of the consortium, with whom EPA will correspond concerning the data;
- c. Identity of the Registration Standard containing the data requirement;
- d. A list of the products affected (from all members of the consortium); and
- e. Identification of the specific data that the consortium will be generating or submitting.

The Agency will assign a number to the consortium, which should be used on all data submissions by the consortium.

3. You have attempted to enter into an agreement to jointly develop data, but no other registrant has accepted your offer. You request that EPA not suspend your registration for non-compliance with the DCI. EPA has determined that, as a general policy, it will not suspend the registration of a product when the registrant has in good faith sought and continues to seek to enter into a data development/cost sharing program, but the other registrants developing the data have refused to accept its offer. [If your offer is accepted, you may qualify for Option 2 above by entering into an agreement to supply the data.]

In order to qualify for this method, you must:

1. File with EPA a completed "Certification of Attempt to Enter into an Agreement with other Registrants for Development of Data" (EPA Form 8580-6, enclosed).

2. Provide us with a copy of your offer to the other registrant and proof of the other registrant's receipt of your offer (such as a certified mail receipt). Your offer must, at a minimum, contain the following language or its equivalent:

[Your company name] offers to share in the burden of producing the data required pursuant to FIFRA sec. 3(c)(2)(B) in the [name of active ingredient] Registration Standard upon terms to be agreed or failing agreement to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii).

The remainder of your offer may not in any way attempt to limit this commitment. If the other registrant to whom your offer is made does not accept your offer, and if the other registrant informs us on a DCI Summary Sheet that he will develop and submit the data required under the DCI, then you may qualify for this option. In order for you to avoid suspension under this method, you may not later withdraw or limit your offer to share in the burden of developing the data.

In addition, the other registrant must fulfill its commitment to develop and submit the data as required by this Notice in a timely manner. If the other registrant fails to develop the data or for some other reason would be subject to suspension, your registration as well as that of the other registrant will normally be subject to initiation of suspension proceedings, unless you commit to submit and submit the required data in the specified timeframe. In such cases, the Agency generally will not grant a time extension for submitting the data.

4. You request a waiver of the data requirement. If you believe that a data requirement does not (or should not) apply to your product or its uses, you must provide EPA with a statement of the reasons why you believe this is so. Your statement must address the specific composition or use factors that lead you to believe that a requirement does not apply. Since the Agency has carefully considered the composition and uses of pesticide products in determining that a data requirement applies, EPA does not anticipate that many waivers will be granted. A request for waiver does not extend the timeframes for developing required data, and if your waiver request is denied, your registration may be suspended if you fail to submit the data.

5. You request that EPA amend your registration by deleting the uses for which the data are needed. You are not required to submit data for uses which are no longer on your label.

6. You request voluntary cancellation of the registration of your product(s) for which the data are needed.

E. Testing Protocols, Standards for Conducting Acceptable Tests, Guidance on Evaluating and Reporting Data.

All studies required under this Notice must be conducted in accordance with test standards outlined in the Pesticide Assessment Guidelines, unless other protocol or standards are approved for use by the Agency in writing.

As noted herein, these EPA Guidelines, which are referenced in the Data Tables, are available from the National Technical Information Service (NTIS), Attn: Order Desk, 5285 Port Royal Road, Springfield, VA 22161 (tel: 703-487-4650).

Protocols approved by the Organization for Economic Cooperation and Development (OECD) are also acceptable if the OECD-recommended test standards conform to those specified in the Pesticide Data Requirements regulation (Part 158.70). Please note, however, that certain OECD standards (such as test duration, selection of test species, and degrade identification which are environmental fate requirements) are less restrictive than those in the EPA Assessment Guidelines listed above. When using the OECD protocols, they should be modified as appropriate so that the data generated by the study will satisfy the requirements of Part 158. Normally, the Agency will not extend deadlines for complying with data requirements when the studies were not conducted in accord with acceptable standards. The OECD protocols are available from OECD, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006.

F. Procedures for requesting a change in testing protocol.

If you will generate the required data and plan to use test procedures which deviate from EPA's Pesticide Assessment Guidelines or the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit for EPA approval the protocols you propose to use.

You should submit your protocols before beginning testing, because the Agency will not ordinarily accept as sufficient studies using unapproved protocols. A request for protocol approval will not extend the timeframe for submission of the data, nor will extensions generally be given to conduct studies due to submittal of inappropriate protocols.

G. Procedures for requesting extensions of time.

If you think that you will need more time to generate the data than is allowed by EPA's schedule, you may submit a request for an extension of time. Any request for a time

extension which is made as an initial response to a section 3(c)(2)(B) request notice must be submitted in writing to the Product Manager listed at the end of this section and must be made by the 90-day deadline for response. Once dates have been committed to and EPA has accepted these commitments, any subsequent requests for a time extension must be submitted in writing to the Office of Compliance Monitoring at the address given in Section IX.E.

EPA will view failure to request an extension before the data submission response deadline as a waiver of any future claim that there was insufficient time to submit the data. While EPA considers your request, you must strive to meet the deadline for submitting the data.

The extension request should state the reasons why you believe that an extension is necessary and the steps you have taken to meet the testing deadline. Time extensions normally will not be granted due to problems with laboratory capacity or adequacy of funding, since the Agency believes that with proper planning these can be overcome.

A request for an extension does not extend the timeframe for submission of the data. If EPA denies your request for a time extension and you do not submit the data as requested, EPA may begin proceedings to suspend the registrations of your products.

H. PR Notice 86-5 and Any Other Requirements Referenced or Included Within this Notice.

All data submitted in response to this Notice must comply with EPA requirements regarding the reporting of data, including the manner of reporting, the completeness of results, and the adequacy of any required supporting (or raw) data, including, but not limited to, requirements referenced or included in this Notice or contained in PR Notice 86-5 (issued July 29, 1986).

I. Existing stocks provision upon suspension or cancellation.

The Agency has determined that if a registration is suspended for failure to respond to a DCI request under FIFRA sec. 3(c)(2)(B), an existing stocks provision is not consistent with the Act. Accordingly, the Agency does not anticipate granting permission to sell or distribute existing stocks of suspended product except in rare circumstances. If you believe that your product will be suspended or cancelled and that an existing stocks provision should be granted, you have the burden of clearly demonstrating to EPA that granting

such permission would be consistent with the Act. The following information must be included in any request for an existing stocks provision:

1. Explanation of why an existing stocks provision is necessary, including a statement of the quantity of existing stocks and your estimate of the time required for their sale or distribution; and
2. Demonstration that such a provision would be consistent with the provisions of FIFRA.

VII. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Under its DCI authority, EPA has determined that certain product-specific data are required to maintain your registrations in effect. Product-specific data are derived from testing using a specific formulated product, and, unlike generic data, generally support only the registration of that product. All such data must be submitted by the dates specified in this Registration Standard.

If you have a manufacturing use product, these data are listed in Table B. If you have an end use product, the data are listed in Table C. As noted earlier, the Agency has decided that it will not routinely require product-specific data for end use products at this time. Therefore, Table C may not be contained in this Registration Standard; if there is no Table C, you are not required to submit the data at this time.

In order to comply with the product specific data requirements, you must follow the same procedures as for generic data. See Section VI.D, E, F, and G. You should note, however, that product chemistry data are required for every product, and the only acceptable responses are options VI.D.1. (submit data) or VI.D.6. (cancellation of registration).

Failure to comply with the product-specific data requirements for your products will result in suspension of the product's registration.

VIII. REQUIREMENT FOR SUBMISSION OF REVISED LABELING

FIFRA requires each product to be labeled with accurate, complete and sufficient instructions and precautions, reflecting the Agency's assessment of the data supporting the product and its uses. General labeling requirements are set out in 40 CFR 162.10 (see Appendix II - LABELING and SUMMARY). In addition, labeling requirements specific to products containing this pesticide are specified in Section IV.D of this Registration Standard. Applications submitted in response to this notice must include draft labeling for Agency review.

If you fail to submit revised labeling as required, which complies with 40 CFR 162.10 and the specific instructions in Section IV.D., EPA may seek to cancel or suspend the registration of your product under FIFRA sec. 6.

IX. INSTRUCTIONS FOR SUBMISSION

A. Manufacturing Use Products (MUPs) containing the subject pesticide as sole active ingredient.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division for each product subject to this Registration Standard:

a. The "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1), with appropriate attachments.⁵

b. Confidential Statement of Formula (EPA Form 8570-4).

c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

d. Evidence of compliance with data compensation requirements of FIFRA sec. 3(c)(1)(D). Refer to 40 CFR 152.80-152.99.

⁵ If on the Summary Sheet, you commit to develop the data, present arguments that a data requirement is not applicable or should be waived, or submit protocols or modified protocols for Agency review, you must submit a copy of the Summary Sheet (and any supporting information) to the Office of Compliance Monitoring, which will be monitoring the data generated in response to this notice. This submission is in addition to responding to the Product Manager, and should be submitted to the Office of Compliance Monitoring at the address given at the end of this section. (Actual studies are not to be submitted to the Office of Compliance Monitoring.)

2. Within 9 months from receipt of this document you must submit to the Product Manager:

a. Application for Pesticide Registration (EPA Form 8570-1).

b. Two copies of any required product-specific data (See Table B).

c. Three copies of draft labeling, including the container label and any associated supplemental labeling. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft label must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text.

d. Product Specific Data Report (EPA Form 8580-4).

3. Within the times set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

B. Manufacturing Use Products containing the subject pesticide in combination with other active ingredients.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division:

a. FIFRA sec. 3(c)(2)(B) Summary Sheet, with appropriate attachments⁵ (EPA Form 8580-1).

b. Confidential Statement of Formula (EPA Form 8570-4)

c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

2. Within the time frames set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

C. End Use Products containing the subject pesticide as sole active ingredient.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division:

- a. FIFRA Section 3(c)(2)(B) Summary Sheet, with appropriate attachments⁵ (EPA Form 8580-1).
- b. Confidential Statement of Formula (EPA Form 8570-4).
- c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

2. Within 9 months from receipt of this document you must submit to the Product Manager:

- a. Two copies of any product-specific data, if required by Table C.
- b. Product Specific Data Report (EPA Form 8580-4), if Table C lists required product-specific data.

c. Three copies of draft labeling, including the container label and any associated supplemental labeling. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft labeling must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text. End use product labeling must comply specifically with the instructions in Section IV (Regulatory Position and Rationale).

D. Intrastate Products containing the subject pesticide either as sole active ingredient or in combination with other active ingredients.

These products are being called in for full Federal registration. Producers of these products are being sent a letter instructing them how to submit an application for registration.

E. Addresses

The required information must be submitted to the following address:

William H. Miller (PM 16)
Registration Division (TS-767C)
Office of Pesticide Programs
Environmental Protection Agency
401 M St., SW
Washington, D.C. 20460

The address for submissions to the Office of Compliance Monitoring is:

Laboratory Data Integrity Program
Office of Compliance Monitoring (EN-342)
Environmental Protection Agency
401 M St., SW
Washington, D.C. 20460.

TGUIDE-1

GUIDE TO TABLES

Tables A, B, and C contain listings of data requirements for the pesticides covered by this Registration Standard.

Table A contains generic data requirements that apply to the pesticide in all products, including data requirements for which a "typical formulation" is the test substance.

Table B contains product-specific data requirements that apply only to a manufacturing use product.

Table C contains product-specific data requirements that apply only to an end use product.

The data tables are generally organized according to the following format:

1. Data Requirement (Column 1). The data requirements are listed in the order in which they appear in 40 CFR Part 158. The reference numbers accompanying each test refer to the test protocols set out in the Pesticide Assessment Guidelines, which are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.
2. Test Substance (Column 2). This column lists the composition of the test substance required to be used for the test, as follows:

TGAI = Technical grade of the active ingredient
PAI = Pure active ingredient
PAIRA = Pure active ingredient, radio labeled
TEP = Typical end use formulation
MP = Manufacturing use product
EP = End use product

Any other test substances, such as metabolites, will be specifically named in Column 2 or in footnotes to the table.

3. Use pattern (Column 3). This column indicates the use patterns to which the data requirement applies. Use patterns are the same as those given in 40 CFR Part 158. The following letter designations are used for the given use patterns:

A = Terrestrial, food
B = Terrestrial, non-food
C = Aquatic, food
D = Aquatic, non-food
E = Greenhouse, food
F = Greenhouse, non-food
G = Forestry
H = Domestic outdoor
I = Indoor

Any other designations will be defined in a footnote to the table.

TRGUIDE-2

4. Does EPA have data? (Column 4). This column indicates one of three answers:

YES - EPA has data in its files that completely satisfy this data requirement. These data may be cited by other registrants in accordance with data compensation requirements of Part 152, Subpart E.

PARTIALLY - EPA has some data in its files, but such data do not fully satisfy the data requirement. In some cases, the Agency may possess data on one of two, required species, or may possess data on one test substance but not all. The term may also indicate that the data available to EPA are incomplete. In this case, when the data are clarified, or additional details of the testing submitted by the original data submitter, the data may be determined to be acceptable. If this is the case, a footnote to the table will usually say so.

NO - EPA either possesses no data which are sufficient to fulfill the data requirement, or the data which EPA does possess are flawed scientifically in a manner that cannot be remedied by clarification or additional information.

5. Bibliographic citation (Column 5). If the Agency has acceptable data in its files, this column lists the identifying number of each study. This normally is the Master Record Identification (MRID) number, but may be a GS number if no MRID number has been assigned. Refer to the Bibliography Appendices for a complete citation of the study.

6. Must additional data be submitted? (Column 6). This column indicates whether the data must be submitted to the Agency. If column 3 indicates that the Agency already has data, this column will usually indicate NO. If column 3 indicates that the Agency has only partial data or no data, this column will usually indicate YES. In some cases, even though the Agency does not have the data, EPA will not require its submission because of the unique characteristics of the chemical; because data on another chemical can be used to fulfill the data requirement; or because the data requirement has been waived or reserved. Any such unusual situations will be explained in a footnote to the table.

7. Timeframe for submission (Column 7). If column 5 requires that data be submitted, this column indicates when the data are to be submitted, based on the issuance date of the Registration Standard. The timeframes are those established either as a result of a previous Data Call-In letter, or standardized timeframes established by PR Notice 85-5 (August 22, 1985).

8. Footnotes (at the end of each table). Self-explanatory.

TABLE A

[illegible]

TABLE A
GENERIC DATA REQUIREMENTS FOR CHEMICAL: ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
<u>\$158.120 Product Chemistry (Continued)</u>						
<u>Physical and Chemical Characteristics (Continued)</u>						
63-4 - Odor	TCAI	all	1/	1/	Yes	6 Months
63-5 - Melting Point	TCAI	all	1/	1/	Yes	6 Months
63-6 - Boiling Point	TCAI	all	NA	—	No ^{5/}	
63-7 - Density, Bulk Density, or Specific Gravity	TCAI	all	1/	1/	Yes	6 Months
63-8 - Solubility	TCAI or PAI	all	1/	1/	Yes	6 Months
63-9 - Vapor Pressure	PAI	all	1/	1/	Yes	6 Months
63-10 - Dissociation constant	PAI	all	1/	1/	Yes	6 Months
63-11 - Octanol/water partition coefficient	PAI	all	NA	—	No ^{6/}	
63-12 - pH	TCAI	all	1/	1/	Yes	6 Months
63-13 - Stability	TCAI	all	1/	1/	Yes	6 Months

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TABLE A
GENERIC DATA REQUIREMENTS FOR CHEMICAL: ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
\$158.120 Product Chemistry (Continued)						
Physical and Chemical Characteristics (Continued)						
Other Requirements:						
64- 1 - Submittal of samples	TCAT, PAI	all	-----	-----	Reserved ^{7/}	

1/ Although product chemistry data may have been submitted in the past, the Agency has determined that these data must be resubmitted for each pesticide. New requirements have been introduced and previously submitted data must be updated. Therefore, bibliographic citations for the old data are not applicable.

2/ Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated.

3/ A description of the new manufacturing process yielding methylthioacetate (MTA) as an impurity, including purities of starting materials, reaction conditions, and any purification and quality control steps must be submitted.

4/ Analysis of five or more representative batches from the altered process for any impurity present at $\geq 0.1\%$ by weight, MTA, and any other highly toxic and/or mutagenic/oncogenic impurity whether above or below 0.1% (w:w) including descriptions and validation of the analytical procedures used must be submitted.

5/ Data not required because the 97% technical material is solid at room temperature.

6/ Data not required because acephate is a polar compound.

7/ If samples are needed, the Agency will request them.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirements	Test Substance	Does EPA Have Data?	Bibliographic Citation ^{10/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
\$158.125 Residue Chemistry					
171-2 - Chemical Identity	TGAI	--	--	Yes ^{3/}	6 Months
171-3 - Directions for Use	NA	Partially	NA	Yes ^{4/}	6 Months
171-4 - Nature of Residue (Metabolism)					
- Plants	PAIRA	Yes	00015187, 00015203 05007862, 00015188 00014990, 00015210 00014989	No	
- Livestock	PAIRA and Plant Metabolites	Yes	00015222; 00014555	No	
171-4 - Residue Analytical Method					
- Plant residues	TGAI and Metabolites	Yes	00014729, 00014579 00014659, 00014983	No	
- Animal residues	TGAI and Metabolites	Yes	00014729	No	
171-4 - Magnitude of the Residue-Residue Studies for Each Food Use					
- Crop Group #1 - Legume Vegetables (succulent or dried)					
o Crop 1 Beans - (dry and succulent incl. lima beans)	TEP	Partially	00014751, 00014787 00014774, 00014775 00014778, 00014777 00014776, 00014540 00014780, 00014781 00014783, 00014541 00014782, 00072783	Yes ^{5/} 9/	24 Months

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirements	Test Substance	Does EPA Have Data?	Bibliographic Citation ^{10/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
\$158.125 Residue Chemistry - Continued					
171-4 - Magnitude of the Residue Residue Studies (continued)					
o Crop 2 - Soybeans	TEP	Partially	00014534, 00014533 00014532, 00015050 00015049, 00015060	Yes ^{9/}	24 Months
- Crop Group #2 - Leafy Vegetables (Except Brassica)					
o Crop 1 - Celery	TEP	Partially	00014770, 00014771 00014772, 00014773 00015326, 00015325 00015323, 00015328 00015324, 00015327 00014769, 00015329 00014768, 00109353	Yes ^{5/}	24 Months
59					
o Crop 2 - lettuce (Crisp head type)	TEP	Partially	00015190, 00015191 00015192, 00015193 00015194, 00015293 00015294, 00014971 00015042, 00014984 00015179	Yes ^{5/}	24 Months
o Crop Group #3 - Brassica (cole) Leafy Vegetables					
o Crop 1 - Brussels Sprouts	TEP	Yes	00115240; 00014984 00015179	No ^{5/}	
o Crop 2 - Cauliflower	TEP	Yes	00115240	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirements	Test Substance	Does EPA Have Data?	Bibliographic Citation ^{10/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
<u>\$158.125 Residue Chemistry - Continued</u>					
171-4 - Magnitude of the Residue Residue Studies (continued)					
- Crop Group #4 - Fruiting Vegetables (except cucurbits)					
o Crop 1 - Peppers	TEP	Yes	00014765, 00014760 00014762, 00014763 00014764, 00157929 00160397; 00014659	No	
- Crop Group #5 - Grass Forage, Fodder, and Hay					
o Crop 1 - Grass (pasture and range)	TEP	Partially	00063467	Yes ^{5/} 6/	24 Months
o Crop 2 - Grass Hay	TEP	Partially	00063467	Yes ^{6/}	24 Months
- Crop Group #6 - Small Fruits and Berries					
o Crop 1 - Cranberries	TEP	Yes	00115589	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirements	Test Substance	1/ Does EPA Have Data?	Bibliographic Citation ^{10/}	Must Addi- tional Data Be Submitted?	Timeframe for Submission ^{2/}
<u>\$158.125 Residue Chemistry - Continued</u>					
171-4 - Magnitude of the Residue Residue Studies (continued)					
- Miscellaneous Crops					
o Crop 1 - Cotton	TEP	Partially	00015199, 00015198 00015206, 00014852 00015038, 00014854 00015206, 00014855 00015196, 00014853	Yes ^{5/}	24 Months
o Crop 2 - Mint Hay (peppermint and spearmint)	TEP	Yes	00029683, 00029684; 00029685	No ^{4/}	
o Crop 3 - Peanuts	TEP	Yes	00093722; 00093723	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirements	Test Substance	Does EPA Have Data?	Bibliographic Citation ^{10/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
<u>\$158.125 Residue Chemistry - Continued</u>					
171-4 - Magnitude of the Residue Residue Studies (continued)					
- Meat/Milk/Poultry/Eggs	TGAI or Plant Metabolites	Partially	00015226 00015183 00015225 00015222 00015230 00015245	Yes ^{5/} 12/	18 Months
- Potable Water	EP	N/A			
- Fish	EP	N/A			
- Irrigated Crops	EP	No	--	No ^{11/}	
- Food Handling	EP	Yes	00014655 00014656 00014657 00014658 00036955	No ^{8/}	
171-5 - Reduction of Residue	Residue of Concern	No	--	Yes ^{9/}	24 Months
171-11 - Tobacco	TEP	Partially	00015122 00015125 00109354 05014159	Yes ^{7/}	24 Months

TABLE A
GENERAL DATA REQUIREMENTS FOR ACEPHATE

\$158.125 Residue Chemistry - Continued

- 1/ Residue of concern = acephate and methamidophos have been identified as the residues of concern resulting from application of acephate.
- 2/ Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated.
- 3/ The same chemical identity data as required under \$158.120 are required, with emphasis on impurities that could constitute a residue problem.
- 4/ Refer to Chapter II, F3f, of this document for the required use restriction statements for peppermint, spearmint, pasture, and rangeland.
- 5/ The available data (GS0042002 and GS0042003) suggest that the stability of acephate residues upon frozen storage is dependent upon the stored, treated commodity. Of the six crops tested, only lettuce and brussels sprouts have been assigned acephate tolerances. No data are available concerning residue stability in stored animal products. We do not feel that the tested commodities are representative of all crops regulated for acephate tolerances, especially in light of the erratic lettuce storage data. We, therefore, cite the following data gap which must be satisfied.
 - o Weathered residues of acephate and methamidophos must be determined in and on the following commodities immediately prior to storage and at intervals approximating the maximum period of storage at subfreezing temperatures: beans, celery, cottonseed, grass, and lettuce. In addition, eggs, milk and animal tissues must be similarly tested.
- 6/ It is estimated that, based on available residue data, the established tolerance level for acephate residues in milk are likely to be exceeded if maximum levels of spent mint hay or grass hay are included in the dairy animal diet. To ensure that the established tolerance level in milk will not be exceeded the following data must be submitted to maintain continued registration of the use of acephate on pasture and rangeland:

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

\$158.125 Residue Chemistry - Continued

6/ Cont.

Either submit a tolerance proposal to lower the tolerance for grass and grass hay with appropriate supporting residue data or submit revised labeling prohibiting the grazing and feeding of grass or grass hay to dairy animals. As another alternative, additional residue data for both grass and grass hay supporting pregrazing and preharvest intervals (PHI) longer than 21 days may be submitted. Should the registrant elect to submit additional residue data to support a lower tolerance or a longer PHI, the grazing and feeding prohibition referenced above must be added to the labeling as an interim labeling restriction pending submittal and evaluation of the data.

7/ Tobacco residue data generated from aerial applications of acephate are required.

8/ These data are sufficient to support the current established food additive tolerance for use of acephate in food handling establishments under 21 CFR 193. Additional data and a proposed tolerance under 21 CFR 561 would be required to support use of acephate in food areas of feed handling establishments. The current registered use of acephate in food areas of food handling establishments is restricted for use in food (as opposed to feed) handling establishments.

9/ Residue data on food prepared for consumption for the following commodities are needed to estimate actual dietary exposure to residues of acephate and its metabolite, methamidophos from consumption of these foods.

Beans, succulent: Available canning data are quite variable for residues of both acephate and methamidophos and, in addition, sampling was inadequate. Canning does, however, appear to be a potential route of dietary exposure reduction. No cooking (boiling) data are available on beans. Therefore, the following data must be submitted to estimate actual dietary exposure to succulent beans:

- o Cooking (boiling) of succulent green beans according to common consumer practices. Beans must bear field-weathered, detectable residues of acephate and methamidophos. Beans must be analyzed both before and after cooking. Cooking water should also be analyzed.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

§158.125. Residue Chemistry - Continued

- o Commercial processing (canning) of field-treated, succulent green beans bearing detectable residues of acephate and methamidophos. Beans must be analyzed both before and after canning. Canning water should also be analyzed.

Beans, dried: No canning or cooking data are available. Data are insufficient to support an increase in the PHI, if desired. The following data are required to estimate the actual dietary exposure to residues in dry beans:

- o Pinto and/or navy beans must be field-treated with the 75% soluble concentrate/solid formulation (SC/S) six times at 1 lb ai/A. Beans are to be allowed to dry normally, and then both boiled and canned, in separate tests, according to typical home or commercial preparation procedures. Cooking fluid and beans must be analyzed both before and after boiling and canning for residues of acephate and its metabolite methamidophos.

Soybean oil: The available processing data are not adequate to estimate the dietary exposure due to consumption of soybean oil.

Acephate residues in crude oil may be present $\leq 33\%$ of the concentration in or on soybean seed. Cottonseed data indicate that further reductions in residues would occur upon refining the crude oil but data are insufficient to make a reliable estimation. Therefore, the following data must be submitted.

- o A determination of residues of acephate and methamidophos in crude oil and refined oil.

Soybean, defatted flour: There are no data available on the degree of concentration (or reduction) of residues of acephate and methamidophos in defatted flour, which is used as a component of infant formula. A four-fold residue concentration generally occurs upon processing soybeans to soybean meal (and, presumably, defatted flour), as reflected by the 1.0 ppm vs. 4 ppm tolerances in or on seed vs. meal, respectively.

Defatted flour is similar to soybean meal but has not been toasted and is more finely ground. Therefore, the following study must be submitted to refine the estimated dietary exposure due to consumption of defatted soybean flour.

- o A determination of the degree of concentration (or reduction) of acephate and methamidophos upon processing soybeans (containing field-weathered residues) to defatted flour.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

§158.125 Residue Chemistry - Continued

- 10/ Where there are more than one bibliographic data citation listed for a data requirement, each study by itself only partially satisfies that data requirement.
- 11/ These data are not required because the registered use of acephate as described in this document indicate that crops are not irrigated with acephate treated water.
- 12/ Milk: Dairy products contribute 4.2 - 26.1% of the ADI, depending on the population under consideration. The Tolerance Assessment System (TAS) recognizes three milk fractions: nonfat milk solids, milkfat solids, and milk sugar (lactose). However, no data are available concerning the fate of residues upon pasteurization or processing into the fractions noted above. The following data are required for an actual exposure assessment:
 - o A dairy cattle feeding study must be conducted in which cattle are fed acephate and methamidophos at an approximately 5:1 ratio in the diet. The feeding level should be high enough to result in detectable residues of both acephate and methamidophos in milk. Exaggerated rates would be advantageous. Residues of acephate and methamidophos must be determined in whole raw milk (containing detectable residues of each compound), pasteurized milk, and in nonfat milk solids, milkfat solids, and possibly milk sugar (lactose).

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{9/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.130 Environmental Fate</u>						
<u>DEGRADATION STUDIES-LAB:</u>						
161-1 - Hydrolysis	TGAI or PAIRA	A, B, F, G, H	Yes	00014986	NO ^{8/}	
<u>Photodegradation</u>						
161-2 - In water	TGAI or PAIRA	A, B, G	Yes	00014987 00015202	NO	
161-3 - On soil	TGAI or PAIRA	A, B, G	NO	--	Yes	9 Months
161-4 - In Air	TGAI or PAIRA	A, B	NO	--	NO ^{2/}	
<u>METABOLISM STUDIES-LAB:</u>						
162-1 - Aerobic Soil	TGAI or PAIRA	A, B, F, H	Yes	00014991	NO	
162-2 - Anaerobic Soil	TGAI or PAIRA	A, B	Yes	00014991	NO	
162-3 - Anaerobic Aquatic	TGAI or PAIRA	G	NO	--	Yes	27 Months
162-4 - Aerobic Aquatic	TGAI or PAIRA	G	Yes	00014988 05018064	NO	
<u>MOBILITY STUDIES:</u>						
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A, B, F, G, H	Partially	00015209 00015213 00014992 00015212	Yes ^{3/}	12 Months
163-2 - Volatility (Lab)	TEP	A, B, F	NO	--	NO ^{2/}	
163-3 - Volatility (Field)	TEP	A, B, F	NO	--	NO ^{2/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{9/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.130 Environmental Fate - Continued</u>						
<u>DISSIPATION STUDIES-FIELD:</u>						
164-1 - Soil	TEP	A,B,H	No		Yes	27 Months
164-2 - Aquatic (Sediment)	TEP				No ^{4/}	
164-3 - Forestry	TEP	G	Yes	00014637, 00029738 00014638, 05015409 00014642 00014635	No	
164-4 - Combination and Tank Mixes ^{10/}						
164-5 - Soil, Long-term	TEP	A,B,G,H	No	--	Reserved ^{5/}	
<u>ACCUMULATION STUDIES:</u>						
165-1 - Rotational Crops (Confined)	PAIRA	A	Partially	00015210	Yes ^{11/}	39 Months
165-2 - Rotational Crops (Field)	TEP	A	No	--	Reserved ^{6/}	
165-3 - Irrigated Crops	TEP	Cranberries	No	--	Yes ^{7/}	39 Months
165-4 - In Fish	TGAI or PAIRA	A,B,G	Yes	00015243	No	
165-5 - In Aquatic Nontarget Organisms	TEP	G, Cranberries	Partially	00014637, 00014496 00014638, 00015242 00014642 00014635	No ^{12/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

\$158.130 Environmental Fate - Continued

- 1/ Due dates refer to the number of months following issuance of the Registration Standard, unless otherwise indicated.
- 2/ These data are not required because of the low vapor pressure of acephate.
- 3/ Adsorption/desorption data must be submitted.
- 4/ These data are not required because there are no aquatic uses registered for acephate.
- 5/ The Agency will determine whether this study is required based on an evaluation of the dissipation studies required in 164-1 of this table. If required, the Agency will notify the registrant and will provide a time frame for submittal of the study which will be 49 months from date of notification.
- 6/ The Agency will determine whether this study is required based on an evaluation of the confined rotational crop data required in 165-1 of this table. If required, the Agency will notify the registrant and will provide a time frame for submittal of the study which will be 50 months from date of notification.
- 7/ These data are required to support the use of acephate on cranberries.
- 8/ Though information related to the sterility of water is lacking, the data are acceptable to satisfy this data requirement because acephate is essentially stable to hydrolysis and photolysis.
- 9/ Where there is more than one bibliographic data citation listed for a data requirement, each study by itself only partially satisfies that data requirement.
- 10/ These data are not required because this Document only addresses single active ingredient products.
- 11/ These data are required for leafy vegetable crops and small grains.
- 12/ No additional data are required because data submitted for 165-4 and 165-5 shows that acephate does not bioaccumulate in nontarget organisms.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{9/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.135 Toxicology</u>						
<u>ACUTE TESTING:</u>						
81-1 - Acute Oral Toxicity - Rat	TGAI	A, B, F, G, H, I	Yes	00014675 00029696	No	
81-2 - Acute Dermal Toxicity - Rabbit	TGAI	A, B, F, G, H, I	Yes	00014681 00055602	No	
81-3 - Acute Inhalation Toxicity - Rat	TGAI	A, B, F, G, H, I	Yes	00015307	No	
81-7 - Delayed Neurotoxicity - Hen	TGAI	A, B, F, G, H, I	Yes	00154884	No	
<u>SUBCHRONIC TESTING:</u>						
82-1 - 90-Day Feeding : - Rodent, and - Nonrodent (Dog)	TGAI	--	No	--	No ^{2/}	
82-2 - 21-Day Dermal - Rabbit	TGAI	--	Yes	00109531	No ^{2/}	
82-3 - 90-Day Dermal - Rabbit	TGAI	--	No	--	No ^{3/}	
82-4 - 21-Day Inhalation: - Rat	TGAI	Tobacco	No	--	Yes ^{4/}	6 Months (Protocol)
82-5 - 90-Day Neurotoxicity: - Hen	TGAI	A, B, F, G, H, I	No	--	No ^{5/}	
-Mammal			No	--	No ^{5/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{9/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.135 Toxicology - Continued</u>						
<u>CHRONIC TESTING:</u>						
83-1 - Chronic Toxicity - 2 species: - Rodent, and - Nonrodent (Dog)	TGAI	A	Partial	00030070 00084017	Yes ^{10/}	6 Months (Protocol)
		A	Yes	00014699 00014938	No	
83-2 - Oncogenicity - 2 species: - Rat (preferred), and - Mouse (preferred)	TGAI	A,B,F,G,H,I	Yes	00030070 00084017 00101623	No	
		A,B,F,G,H,I	Yes	00077209; 00128919 00029703; 00129155 00105194	No	
83-3 - Teratogenicity - 2 species: - Rat - Rabbit	TGAI	A,I	Yes	00014695	No	
83-4 - Reproduction - Rat 2-generation	TGAI	A	No	00069684, 00069683	No	39 Months
<u>MUTAGENICITY TESTING</u>						
84-2 - Gene Mutation (Ames Test)	TGAI	A,B,F,G,H,I	Yes	00132949, 00028625 00119080, 00119083 00119082, 00132950 00132955	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{9/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.135 Toxicology - Continued</u>						
84-2 - Structural Chromosomal Aberration	TGAI	A, B, F, G, H, I	Yes	00132953, 00119084 00119081, 00137736	No	
84-4 - Other Genotoxic Effects	TGAI	A, B, F, G, H, I	Yes	00132954	No	
<u>SPECIAL TESTING</u>						
85-1 - General Metabolism	PAI or PAIRA	A	Yes	00014219 00014518 00014994	No	
85-2 - Dermal Penetration	Choice	A, B, F, G, H, I	No	--	Yes ^{6/}	6 Months (Protocol)
86-1 - Domestic Animal Safety	Choice	--	--	--	No ^{7/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

\$158.135 Toxicology - Continued

- 1/ Due dates refer to the number of months following issuance of the Registration Standard, unless otherwise indicated.
- 2/ These data are not needed to support registration of acephate because the available 28-month rat feeding and the 2-year dog feeding studies (83-1) are adequate to assess human exposure via the oral route.
- 3/ This study is not required to support registration of the current use pattern of acephate as described in this Document.
- 4/ This study is required to assess the exposure of man to the residue remaining at the time of use of tobacco. The proposed protocol must be submitted within 6 months. The study must be submitted within 15 months from date of acceptance of the protocol by the Agency.
- 5/ This study is not required because results of the delayed neurotoxicity study (81-7) showed acephate is negative for acute delayed neurotoxicity.
- 6/ The proposed protocol must be submitted within 6 months. The study must be submitted within 6 months from date of acceptance of the protocol by the Agency.
- 7/ These data are not required to support registration of the current registered uses of acephate as described in this Document.
- 8/ Though a rat reproduction study has been submitted, it is not acceptable to support registration because a NOEL (non-observable-effect level) was not determined i.e., various effects on reproduction were observed in rats that were fed 50 ppm of the test material, the lowest dose level fed. Therefore, a new reproduction study using lower dose levels is needed in order to determine a definite NOEL for reproductive effects.
- 9/ Where there are more than one bibliographic data citation listed for a data requirement, each study by itself only partially satisfies that data requirement.
- 10/ The NOEL for brain cholinesterase inhibition was not reached in the available rat chronic feeding study. A rat feeding study of proper duration must be conducted for purposes of determining the NOEL for brain cholinesterase inhibition in the rat. An acceptable protocol must be submitted prior to initiation of the study.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.140 Reentry Protection</u>						
132-1 - Foliar Dissipation	TEP	A, B, G	Partially	00015241 05007862	Yes ^{5/}	27 Months
132-1 - Soil Dissipation	TEP	A	No	--	Yes ^{2/}	27 Months
133-3 - Dermal Exposure	TEP	A, B, G	Partially	00015241	Reserved ^{6/}	
133-4 - Inhalation Exposure	TEP	A, B, G	Partially	00015241	Reserved ^{6/}	
<u>\$158.142 Spray Drift</u>						
201-1 - Droplet Size Spectrum	TEP ^{4/}	A, B, G	No	--	Yes ^{4/}	6 Months
201-1 - Drift Field Evaluation	TEP ^{4/}	A, B, G	No	--	Yes ^{4/}	6 Months
<u>Exposure Assessment Studies</u>	TEP	B, F, G, H, I	No	--	Yes ^{3/}	6 Months (Protocol)
<u>Glove Permeability Study</u>	TEP ^{7/}	--	No	--	Yes ^{7/}	6 Months (Protocol)

^{1/} Due dates refer to the number of months following issuance of the Registration Standard, unless otherwise indicated.

^{2/} Soil dissipation data are required for use on peanuts because the registered use of acephate on peanuts as described in this Document involves human tasks that could cause human exposure to residue adsorbed to soil.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

§158.140 Reentry Protection - Continued

- 3/ Studies of potential applicator exposure must be conducted. Outdoor studies must include forestry application, application to tobacco, and to both home and commercial ornamentals. The material must be applied to home ornamentals using a hand compressed air or hose-end sprayer. In addition, studies of indoor exposure of applicators and inhabitants must be carried out for home, greenhouse, and commercial establishment applications. Home application must be by the use of a ready to use pressurized spray. Commercial building application must be by a "coarse spray technique." The postapplication decrease in exposure with time must be monitored.

The references cited below are to be used as guidelines for the exposure studies. The proposed protocol must be submitted within 6 months. The studies must be submitted within 27 months from date of acceptance of the protocol by the Agency.

The following general background documents are available to describe how monitoring studies and quantitative exposure assessments are carried out:

1. Davis, James E. (1980) "Minimizing Occupational Exposure to Pesticides: Personnel Monitoring." Residue Reviews 75: 33.

This review article describes state-of-the-art procedures for the actual field measurement of dermal and respiratory exposure.

2. Severn, David J. (1982) "Exposure Assessment for Agricultural Chemicals" in Genetic Toxicology - An Agricultural Perspective, R.D. Fleck and A. Hollaender, Eds., Plenum Press, New York, p. 235.
This paper presents an overview of how exposure assessments are carried out in EPA, including a discussion of the use of surrogate exposure studies for assessments when no data are available for a particular pesticide.

3. Severn, David J. (1984) "Use of Exposure Data for Risk Assessment." in Determination and Assessment of Pesticide Exposure, M. Siewierski, Ed., Elsevier Science Publishing Company, New York, p. 13
This paper describes in greater detail what assumptions are made and how exposure assessments are performed in EPA.

4. Reinert, Joseph C. and Severn, David J. (1985) "Dermal Exposure to Pesticides: EPA's Viewpoint." in Dermal Exposure Related to Pesticide Uses, R.C. Honeycutt, G. Zweig, and N.N. Ragsdale Eds., American Society, Washington, D.C., p. 357.

This paper is a synthesis of the methodologies and logistics used in preparing applicator exposure assessments in EPA.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Exposure Assessment Studies - Continued

Protocols must be submitted to the Agency for review prior to conduct of the studies. If more detailed guidance is needed, or if specific questions related to any aspect of pesticide exposure assessment arise, contact:

Michael Firestone, Acting Chief
Special Review Section #2
Exposure Assessment Branch
Hazard Evaluation Division (TS-769C)
(703) 557-7356

- 4/ The required studies may consist of either of the following or a combination thereof: (1) A reevaluation of existing published or unpublished data when chemical properties, use patterns, and general geographic/meteorological situations are similar to the proposed product, (2) An undertaking of the studies required in §158.142. Rather than conducting these studies on acephate, the Agency is currently encouraging the submittal of surrogate studies, i.e., published or unpublished information regarding spray drift patterns that would be expected to be similar to the acephate TEP. Refer to Subdivision R of the Pesticide Assessment Guidelines in section 200-1(d).
- 5/ Limited dislodgeable foliar data are available for cotton; dislodgeable residue (decline curve) data are required for cauliflower as a representative crop since, among the current crops registered for acephate as described in this document, cauliflower is considered to be representative of a worst case in regards to the likelihood of human exposure to residues by those involved in hand labor tasks.
- 6/ There are limited data available for use on cotton and it has been determined that this is sufficient given the Agency's current knowledge of acephate. Should the Agency determine that results of the studies required under 132-1 and the use-related exposure data warrant the need for these studies, they will be required. If required, the Agency will notify the registrant and will provide a time frame for submittal of the study which will be 27 months from date of notification. They may, however be submitted at the option of the registrant.
- 7/ Glove permeability studies are required for all liquid formulations of end-use products. The permeability studies are to be conducted as described in ASTM 739-81 Standard Test Method for Resistance of Protective Materials to Permeation by Hazard Liquid Chemicals. The proposed protocol must be submitted within 6 months. The studies must be submitted within 9 months from date of acceptance of the protocol by the Agency. Because the inerts could influence the permeability of a formulation, studies are required to be submitted on a typical end-use liquid formulation representative of a worse case scenario.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.145 Wildlife and Aquatic Organisms</u>						
<u>AVIAN AND MAMMALIAN TESTING</u>						
70-1 - Special Test - Avian Food Residue and Enzyme Monitoring	TEP	A, B	No	--	Yes ^{2/}	6 Months (Protocol)
71-1 - Acute Avian Oral Toxicity	TGAI	A, B, G, H	Yes	00014700* 00014701* 00015962**	No	
71-2 - Avian Subacute Dietary Toxicity - Upland Game Bird, and - Waterfowl	TGAI	A, B, G, H	Yes	00015956	No	
		A, B, G, H	Yes	00015957	No	
71-3 - Wild Mammal Toxicity	TGAI	--	--	--	No ^{6/}	
71-4 - Avian Reproduction - Upland Game Bird, and - Waterfowl	TGAI	A, B, G	Yes	00029692	No	
		A, B, G	Yes	00029691	No	
71-5 - Simulated Field Testing - Mammals, and - Birds	TEP	A, B, G	No	--	Reserved ^{3/}	
		A, B, G	No	--	Reserved ^{3/}	
- Actual Field Testing - Mammals, and - Birds	TEP	A, B, G	No	--	Reserved ^{3/}	
		A, B, G	Partially	05014922 05017571 00014639 00014860 05019256 00093907 05021173 GS042018 00093909 GS042020 40329701	Reserved ^{3/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>S158.145 Wildlife and Aquatic Organisms - Continued</u>						
<u>AQUATIC ORGANISM TESTING</u>						
72-1 - Freshwater Fish Toxicity - Cold water Fish Species, and	TGAI	A, B, G, H	Yes	05018314* 00014705* 40094602*	No	
- Warm water Fish Species		A, B, G, H	Yes	00014705* 40094602*	No	
72-2 - Acute Toxicity to Freshwater Invertebrates	TGAI	A, B, G, H	Yes	05012201* 40094602* GS0042021*	No	
72-3 - Acute Toxicity to Estuarine and Marine Organisms	TGAI					
- Fish		A, B, G	No	---	No ^{4/}	
- Mollusk		A, B, G	Partially	00014713	No ^{4/}	
- Shrimp		A, B, G	Partially	00014711	No ^{4/}	
72-4 - Fish Early Life Stage, and	TGAI					
- Aquatic Invertebrate Life-Cycle			---	---	No ^{5/}	

TABLE A
GENERIC DATA-REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>§158.145 Wildlife and Aquatic Organisms - Continued</u>						
72-5 - Fish - Life-Cycle	TCAT				No ^{5/}	
72-6 - Aquatic Organism Accumulation	TCAT, PAI or Degradation Product				No ^{5/}	
- Crustacean					No ^{5/}	
- Fish					No ^{5/}	
- Insect Nymph					No ^{5/}	
- Mollusk					No ^{5/}	
72-7 - Simulated Field Testing	TEP				No ^{5/}	
- Aquatic Organisms					No ^{5/}	
- Actual Field Testing					No ^{5/}	
-Aquatic Organisms					No ^{5/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

§158.145 Wildlife and Aquatic Organisms - Continued

- 1/ Due dates refer to the number of months following issuance of the Registration Standard, unless otherwise indicated.
- 2/ These data are necessary to support a hazard assessment for the multiple-application, high use-rate field crops. The data must: (1) address the occurrence of acephate-methamidophos in potential wildlife food items at maximum treatment rates under realistic repeat application conditions, and (2) monitor a biological index of toxic effects such as brain ChE in exposed birds. The proposed protocol must be submitted within 6 months. The study must be submitted within 19 months from date of acceptance of the protocol by the Agency. The following references may be useful in designing the monitoring study:
 - ° Niethammer, K.R. and T.S. Basket. 1983. Cholinesterase Inhibition of Birds Inhabiting Wheat Fields Treated with Methyl Parathion. Arch. Environ. Contam. Toxicol. 12, 471-475.
 - ° Bunyan, P.J., M.J. Van Den Heuvel, P.I. Stanley, and E.N. Wright. 1981. An intensive field trial and a multi-site surveillance exercise on the use of aldicarb to investigate methods for the assessment of possible environmental hazards presented by new pesticides. Agro Ecosystems 7: 239-262.
- 3/ The Agency will determine whether these data are required based on an evaluation of the avian residue monitoring studies requested in 70-1 of this table. If required, the Agency will notify the registrant and will provide a timeframe for submittal of the data which will be from 24 to 48 months from date of notification, depending on testing required.
- 4/ These data are not required to support current registered uses of acephate based on the demonstrated low acute toxicity to fish. However, the two studies cited have been reviewed and used in the hazard assessment of acephate.
- 5/ Based on the demonstrated low acute toxicity to aquatic organisms and the current registered use patterns of acephate, these data are not required.
- 6/ This study is only required on a case-by-case basis. In the case with acephate, the rat toxicity data submitted under 40 CFR 158.135 are sufficient.

* Study by itself satisfies the data requirement.

** Study by itself only partially satisfies the data requirement.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>§158.150 Plant Protection</u>						
121-1 - TARGET AREA PHYTOTOXICITY	EP		2/	-		
<u>NONTARGET AREA PHYTOTOXICITY</u>						
<u>TIER I</u>						
122-1 - Seed Germination/Seedling Emergence	TGAI		2/	-		
122-1 - Vegetative Vigor	TGAI		2/	-		
122-2 - Aquatic Plant Growth	TGAI		2/	-		
<u>TIER II</u>						
123-1 - Seed Germination/Seedling Emergence	TGAI		2/	-		
123-1 - Vegetative Vigor	TGAI		2/	-		
123-2 - Aquatic Plant Growth	TGAI		2/	-		
<u>TIER III</u>						
124-1 - Terrestrial Field	TEP		2/	-		
124-2 - Aquatic Field	TEP		2/	-		

^{1/} Due dates refer to number of months following issuance of the Registration Standard, unless otherwise indicated.

^{2/} These data not required in accordance with §158.150.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Time frame for Submission ^{1/}
<u>\$158.155 Nontarget Insect</u>						
<u>NONTARGET INSECT TESTING - POLLINATORS:</u>						
141-1 - Honeybee acute contact toxicity	TCAI	A, B, G, H	Yes	00014714	No	
141-2 - Honeybee - toxicity of residues on foliage	TEP	A, B, G, H	Yes	00014715	No	
141-4 - Honeybee subacute feeding study	(Reserved) ^{3/}					
141-5 - Field testing for pollinators	TEP	--	No	--	No ^{2/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>§158.155 Nontarget Insect - Continued</u>						
<u>NONTARGET INSECT TESTING - AQUATIC INSECTS:</u>						
142-1 - Acute toxicity to aquatic insects	(Reserved) ^{4/}					
142-1 - Aquatic insect life-cycle study	(Reserved) ^{4/}					
142-3 - Simulated or actual field testing for aquatic insects	(Reserved) ^{4/}					
143-1 - NONTARGET INSECT TESTING - PREDATORS thru AND PARASITES	(Reserved) ^{4/}					
143-3						

^{1/} Due dates refer to number of months following issuance of the Registration Standard, unless otherwise indicated.

^{2/} Results from lower tier study do not indicate the need for field testing.

^{3/} This requirement is reserved pending development of test methodology.

^{4/} This requirement is reserved pending further evaluation to determine what and when data should be required, and to develop appropriate test methods.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>Use Related-Exposure</u>	TEP	A, B, F, G, H, I	No	--	Yes ^{2/}	6 Months

^{1/} Due dates refer to number of months following issuance of the Registration Standard, unless otherwise indicated.

^{2/} The following data are required for the uses of acephate in forests; on domestic and commercial ornamentals; cotton; lettuce; and for indoor uses in homes, greenhouses and commercial establishments.

- Applicator types (homeowners, grower, PCO, etc.).
- Rate ranges and most commonly used rate in active ingredient per unit.
- Most commonly used formulations and package sizes with percentages of each.
- Most commonly used carrier/diluent(s); report ratios.
- Report methods of application (ground vs. air; band vs. broadcast; fixed boom vs. rope wick; etc.) and projected percentages of each.
- Report application timing in relation to crop growth and pest growth (life cycle). Report number of applications and application intervals; report percent applied at each application (% preemergence vs. % postemergence vs. % layby). Report timing of field operations (cultivation, thinning, harvesting, etc.) in relation to pesticide application(s) timing.
- For pesticide(s) of concern, describe typical equipment and factors such as width of boom, volume per unit application, speed of spraying equipment (MPH), tank size and type, normal operating pressure (PSI), nozzle types, percent use of open vs. closed cabs, percent use of closed system transfer. (If preemergence, describe if planting operation is commonly performed at the time of pesticide application.)

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE

Use Related Exposure - Continued

- h) Describe if nurse tank is used; ferrying time and average distance to water source.
- i) Calculate time required to spray out an average tank full of pesticide; and the total number of acres/unit that can be treated in a typical work day.
- j) Describe mixing/loading procedures commonly employed and numbers of mixers/loaders/applications (number of each type) employed for the entire spray operation; describe if applicator and mixer/loader are the same person, if not, give percentages of each type. Calculate actual mixer-loader pesticide exposure time; excluding time spent to add diluent.
- k) Describe preharvest; reentry intervals.
- l) Describe proportion of grower vs. custom applicators and custom equipment types commonly employed.
- m) Estimate total numbers of workers exposed per site/unit by type (applicators, mixer-loaders, flaggers, etc.). If there are fetotoxic or teratogenic concerns, estimate number of females employed.
- n) Describe protective clothing, equipment, and other currently employed means of pesticide exposure avoidance.
- o) Describe methods of pesticide and container disposal currently employed.
- p) Estimate numbers of bystanders potentially exposed to spray or dust from treated fields.
- q) Identify increased or reduced hazards associated with mixing-loading and applying alternative chemicals. Identify any other hazards to farmworkers, bystanders, fish and wildlife, water supplies, etc., associated with potential increased use if the review chemicals were not available.

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation ^{1/}	Must Additional Data Be Submitted?	Timeframe for Submission ^{2/}
<u>\$158.120 Product Chemistry</u>						
<u>Product Identity:</u>						
61-1 - Product Identity and Disclosure of Ingredients	MP	all	1/	1/	Yes	6 Months
61-2 - Description of Beginning Materials and Manufacturing Process	MP	all	1/	1/	Yes ^{7/}	6 Months
61-3 - Discussion of Formation of Impurities	MP	all	1/	1/	Yes ^{7/}	6 Months
<u>Analysis and Certification of Product Ingredients</u>						
62-1 - Preliminary Analysis	MP	all	1/	1/	Yes ^{8/}	12 Months
62-2 - Certification of Limits	MP	all	1/	1/	Yes	12 Months
62-3 - Analytical Methods to Verify Certified Limit	MP	all	1/	1/	Yes ^{8/}	12 Months
<u>Physical and Chemical Characteristics</u>						
63-2 - Color	MP	all	1/	1/	Yes	6 Months
63-3 - Physical State	MP	all	1/	1/	Yes	6 Months
63-4 - Odor	MP	all	1/	1/	Yes	6 Months
63-7 - Density, Bulk Density, or Specific Gravity	MP	all	1/	1/	Yes	6 Months
63-12 - pH	MP	all	1/	1/	Yes	6 Months
63-14 - Oxidizing or Reducing Action	MP	all	1/	1/	Yes	6 Months

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation?	Must Additional Data Be Submitted?	Timeframe for Submission?
\$158.120 Product Chemistry (Continued) Physical and Chemical Characteristics (Continued)						
63-15 - Flammability	MP	all	1/	1/	Yes 3/	6 Months
63-16 - Explodability	MP	all	1/	1/	Yes 4/	6 Months
63-17 - Storage Stability	MP	all	1/	1/	Yes 9/	15 Months
63-18 - Viscosity	MP	all	1/	1/	Yes 5/	6 Months
63-19 - Miscibility	MP	all	1/	1/	Yes 6/	6 Months
63-20 - Corrosion Characteristics	MP	all	1/	1/	Yes	15 Months

Other Requirements:

64- 1 - Submittal of samples

Reserved 10/

1/ Although product chemistry data may have been submitted in the past, the Agency has determined that these data must be resubmitted for each manufacturing-use product. New requirements have been introduced and previously submitted data must be updated. Therefore, bibliographic citations for the old data are not applicable.
2/ Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated.

3/ Data required for MP's that are combustible liquids.

4/ Data required for MP's that contain an explosive ingredient.

5/ Data required for liquid MP's.

6/ Data required for MP's that are emulsifiable liquids.

7/ A description of the new manufacturing process yielding methylthioacetate (MTA) as an impurity, including purities of starting materials, reaction conditions, and any purification and quality control steps must be submitted.

8/ Analysis of five or more representative batches from the altered process for any impurity present at >0.1% by weight, MTA, and any other highly toxic and/or mutagenic/oncogenic impurity whether above or below 0.1% (w:w) including descriptions and validation of the analytical procedures must be submitted. The 97%, 85% and 75% MP's derived from the new manufacturing process must all be analyzed. Confidential statements of formula must also be submitted for all three products.

9/ Storage stability data to determine if MTA forms (or declines) in the 97%, 85% and 75% MP's must be submitted.

10/ If samples are needed, the Agency will request them.

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE (97%)

Data Requirement	Test Substance	Does EPA Have Data?	Bibliographic Citation ² / _*	Must Additional Data Be Submitted?	Timeframe for Submission ¹ / _*
<u>\$158.135 Toxicology</u>					
<u>ACUTE TESTING</u>					
81-1 - Acute Oral Toxicity - Rat	MP	Yes	00014675 00029696	No	
81-2 - Acute Dermal Toxicity - Rabbit	MP	Yes	00014681 00055602 00055604	No	
81-3 - Acute Inhalation Toxicity - Rat	MP	Yes	00015307	No	
81-4 - Primary Eye Irritation - Rabbit	MP	Yes	00014686	No	
81-5 - Primary Dermal Irritation - Rabbit	MP	Yes	00015305 00022096	No	
81-6 - Dermal Sensitization - Guinea Pig	MP	Yes	00119085 00154885	No	

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE (85%)

Data Requirement	Test Substance	Does EPA Have Data?	Bibliographic Citation ^{3/*}	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.135 Toxicology</u>					
<u>ACUTE TESTING</u>					
81-1 - Acute Oral Toxicity - Rat	MP	Yes	00060858	No	
81-2 - Acute Dermal Toxicity - Rabbit	MP	Yes	00014681 00055602	No ^{5/}	
81-3 - Acute Inhalation Toxicity - Rat	MP	Yes	00015307	No ^{5/}	
81-4 - Primary Eye Irritation - Rabbit	MP	Yes	00060862	No	
81-5 - Primary Dermal Irritation - Rabbit	MP	Yes	00015305 00014682	No ^{6/}	
81-6 - Dermal Sensitization - Guinea Pig	MP	Yes	00119085 00154885	No ^{5/}	

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE (75%)

Data Requirement	Test Substance	Does EPA Have Data?	Bibliographic Citation ⁴ / _*	Must Additional Data Be Submitted?	Timeframe for Submission ¹ / ₋
<u>\$158.135 Toxicology</u>					
<u>ACUTE TESTING</u>					
81-1 - Acute Oral Toxicity - Rat	MP	Yes	00060858	No ⁸ / ₋	
81-2 - Acute Dermal Toxicity - Rabbit	MP	Yes	00014681 00055602	No ⁷ / ₋	
81-3 - Acute Inhalation Toxicity - Rat	MP	Yes	00014683	No	
81-4 - Primary Eye Irritation - Rabbit	MP	Yes	00014686	No	
81-5 - Primary Dermal Irritation - Rabbit	MP	Yes	00014682	No	
81-6 - Dermal Sensitization - Guinea Pig	MP	Yes	00119085 00154885	No ⁷ / ₋	

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING ACEPHATE

§158.135 Toxicology - Continued

- 1/ Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated.
- 2/ These data are sufficient to support registration of the 97% MP currently registered.
- 3/ These data are sufficient to support registration of the 85% MP currently registered.
- 4/ These data are sufficient to support registration of the 75% MP currently registered.
- 5/ Though these studies were conducted with the 97% MP, they are sufficient to support registration of the 85% MP.
- 6/ Though these studies were conducted with the 97% MP (00015305) and 75% (GS0042043), they are sufficient, when taken together to support registration of the 85% MP.
- 7/ Though this study was conducted with the 97% MP, it is sufficient to support registration of the 75% MP.
- 8/ Though this study was conducted with the 85% MP, it is sufficient to support registration of the 75% MP.

* Where there are more than one bibliographic data citation listed for a data requirement, each study by itself only partially satisfies that data requirement.

TABLE C
PRODUCT SPECIFIC DATA REQUIREMENTS FOR END-USE PRODUCTS CONTAINING ACEPHATE

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Under Timeframe For Submission ^{1/}
<u>Usage Data</u>	TEP	A, B, F, G, H, I	NO	---	Yes ^{2/}	6 Months

^{1/} Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated. The following data are required for the uses of acephate in forests; on domestic and commercial ornamentals; cotton; lettuce; and for indoor uses in homes, greenhouses, and commercial establishments.

- Total acres/units treated by commodity (site) in U.S.
- Lbs/gallon ai applied annually to each site and most commonly used application rate.
- Geographic areas of use, by site.
- Product end-use data. Describe commodity end-uses and estimate percentages of each. For example: Percent of apples sold for fresh fruit, percent sold for processing (broken down by juice vs. applesauce).
- Sales and production records including container types and sizes and State sales.

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE'S IMPURITY, METHYLTHIOACETATE (MTA)

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ¹
<u>\$158.135 Toxicology</u>						
<u>ACUTE TESTING:</u>						
81-1 - Acute Oral Toxicity - Rat	PI	A, B, F, G, H, I	No	--	Yes ² /	9 Months
- Rabbit			No	--	Yes ² /	9 Months
81-2 - Acute Dermal Toxicity - Rat	PI	A, B, F, G, H, I	No	--	Yes ³ /	9 Months
- Rabbit			Partially	00149758 00149762 00149759	Yes ⁴ /	9 Months
81-3 - Acute Inhalation Toxicity - Rat	PI	A, B, F, G, H, I	Partially	00149761	Yes ⁵ /	9 Months
81-4 - Primary Eye Irritation - Rabbit	PI	A, B, F, G, H, I	Yes	00150169; 00150168	No	
81-5 - Primary Dermal Irritation - Rabbit	PI	A, B, F, G, H, I	Yes	00149760	No	
81-6 - Dermal Sensitization - Guinea Pig	PI	A, B, F, G, H, I	Yes	00149774	No	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE'S IMPURITY, METHYLTHIOACETATE (MTA)

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data Be Submitted?	Timeframe for Submission ^{1/}
<u>\$158.135 Toxicology - Continued</u>						
<u>SUBCHRONIC TESTING:</u>						
82-1 - 90-Day Feeding: - Rodent, and - Nonrodent (Dog)	PI	A, B, F, G, H, I	No	--	Reserved ^{6/}	
82-3 - 90-Day Dermal - Rabbit	PI	A, B, F, G, H, I	No	--	Reserved ^{6/}	15 Months
82-4 - 90-Day Inhalation: - Rat	PI	A, B, F, G, H, I	No	--	Reserved ^{8/}	
<u>MUTAGENICITY TESTING</u>						
84-2 - Gene Mutation (Ames Test)	PI	A, B, F, G, H, I	Partially	00149764	Yes ^{10/}	9 Months
84-2 - Structural Chromosomal Aberration	PI	A, B, F, G, H, I	No	--	Yes	12 Months
84-4 - Other Genotoxic Effects	PI	A, B, F, G, H, I	No	--	Yes	12 Months
<u>SPECIAL TESTING</u>						
- Neurophysiological Studies of the Visual System	PI	A, B, F, G, H, I	No	--	Reserved ^{9/}	

TABLE A
GENERIC DATA REQUIREMENTS FOR ACEPHATE'S IMPURITY, METHYLTHIOACETATE (MTA)

\$158.135 Toxicology - Continued

- 1/ Due dates refer to the number of months following issuance of this Registration Standard, unless otherwise indicated.
- 2/ These studies must be performed with histopathologic examinations of the visual system and pituitary.
- 3/ The rat acute dermal study referenced in the "Material Information Bulletin" for methylthioacetate received from Chevron Chemical Company must be submitted. This study has now been received but not yet evaluated by the Agency.
- 4/ Report Socal No. 2207 (GS0042049) is an interim report; the final report must be submitted. This report has now been received but not yet evaluated by the Agency.
- 5/ The available rat acute inhalation study is classified as core minimum. An additional study must be performed with histopathologic examinations of the visual system and pituitary.
- 6/ If blindness and/or lesions of the visual system or pituitary are observed in the acute oral studies (81-1), then 90-day feeding studies will be required. If required, the Agency will notify the registrant and will provide a time frame for submittal of the data which will be 15 months from date of notification.
- 7/ A no-observed effect level (NOEL) for blindness and related histopathologic lesions must be defined.
- 8/ If blindness and/or lesions of the visual system or pituitary are observed in the acute inhalation study required to be submitted, then a 90-day inhalation study will be required. If required, the Agency will notify the registrant and will provide a time frame for submittal of the data which will be 15 months from date of notification.
- 9/ The requirement for these studies are reserved pending submittal and evaluation of the toxicology data required in this table for MTA.
- 10/ A mouse lymphoma mutagenicity screen test conducted on MTA has been received and is acceptable. Additional testing as specified in the 84-2 data guidelines are required.

SUMMARY-1

LABEL CONTENTS

40 CFR 162.10 requires that certain specific labeling statements appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to the table at the end of this Appendix.

Item 1. **PRODUCT NAME** - The name, brand or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading.

Item 2. **COMPANY NAME AND ADDRESS** - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text.

Item 3. **NET CONTENTS** - A net contents statement is required on all labels or on the container of the pesticide. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be expressed in the largest suitable unit, e.g., "1 pound 10 ounces" rather than "26 ounces." In addition to English units, net contents may be expressed in metric units. [40 CFR 162.10(d)]

Item 4. **EPA REGISTRATION NUMBER** - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. [40 CFR 162.10(e)]

Item 5. **EPA ESTABLISHMENT NUMBER** - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment number on the immediate container cannot be clearly read through such wrapper or container. [40 CFR 162.10(f)]

Item 6A. **INGREDIENTS STATEMENT** - An ingredients statement is required on the front panel. The ingredients statement must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredients statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. [40 CFR 162.10(g)]

SUMMARY-2

Item 6B. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - Front panel precautionary statements must be grouped together, preferably within a block outline. The table below shows the minimum type size requirements for various size labels.

<u>Size of Label on Front Panel in Square Inches</u>	<u>Signal Word Minimum Type Size All Capitals</u>	<u>"Keep Out of Reach of Children" Minimum Type Size</u>
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - The statement "Keep Out of Reach of Children" must be located on the front panel above the signal word except where contact with children during distribution or use is unlikely. [40 CFR 162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (DANGER, WARNING, or CAUTION) is required on the front panel immediately below the child hazard warning statement. [40 CFR 162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, dermal, or inhalation toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word POISON. [40 CFR 162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. [40 CFR 162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. [40 CFR 162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. [40 CFR 162.10(h)(2)].

SUMMARY-3

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. [40 CFR 162.10(h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. [40 CFR 162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD - FLAMMABILITY
Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in the PHYS/CHEM Labeling Appendix. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

Item 9A. RESTRICTED USE CLASSIFICATION - FIFRA sec. 3(d) requires that all pesticide formulations/uses be classified for either general or restricted use. Products classified for restricted use may be limited to use by certified applicators or persons under their direct supervision (or may be subject to other restrictions that may be imposed by regulation).

In the Registration Standard, the Agency has (1) indicated certain formulations/uses are to be restricted (Section IV indicates why the product has been classified for restricted use); or (2) reserved any classification decision until appropriate data are submitted.

The Regulatory Position and Rationale states whether products containing this active ingredient are classified for restricted use. If they are restricted the draft label(s) submitted to the Agency as part of your application must reflect this determination (see below).

If you do not believe that your product should be classified for restricted use, you must submit any information and rationale with your application for reregistration. During the Agency's review of your application, your proposed classification determination will be evaluated in accordance with the provisions of 40 CFR 162.11(c). You will be notified of the Agency's classification decision.

SUMMARY-4

Classification Labeling Requirements

If your product has been classified for restricted use, the following label requirements apply:

1. All uses restricted.

a. The statement "Restricted Use Pesticide" must appear at the top of the front panel of the label. The statement must be set in type of the same minimum size as required for human hazard signal word (see table in 40 CFR 162.10(h)(1)(iv))

b. Directly below this statement on the front panel, a summary statement of the terms of restriction must appear (including the reasons for restriction if specified in Section I). If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification."

2. Some but not all uses restricted. If the Regulatory Position and Rationale states that some uses are classified for restricted use, and some are unclassified, several courses of action are available:

a. You may label the product for Restricted use. If you do so, you may include on the label uses that are unrestricted, but you may not distinguish them on the label as being unrestricted.

b. You may delete all restricted uses from your label and submit draft labeling bearing only unrestricted uses.

c. You may "split" your registration, i.e., register two separate products with identical formulations, one bearing only unrestricted uses, and the other bearing restricted uses. To do so, submit two applications for reregistration, each containing all forms and necessary labels. Both applications should be submitted simultaneously. Note that the products will be assigned separate registration numbers.

Item 9B. MISUSE STATEMENT - All products must bear the misuse statement, "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." This statement appears at the beginning of the directions for use, directly beneath the heading of that section.

SUMMARY-5

Item 10A. REENTRY STATEMENT - If a reentry interval has been established by the Agency, it must be included on the label. Additional worker protection statements may be required in accordance with PR Notice 83-2, March 29, 1983.

Item 10B. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix II, STOR, PEST/DIS, and CONT/DIS to determine the storage and disposal instructions appropriate for your products.

Item 10C. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment.
[40 CFR 162.10]

COLLATERAL LABELING

Bulletins, leaflets, circulars, brochures, data sheets, flyers, or other written or graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

SUMMARY-6

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by . . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Reg. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Est. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area All products	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked. Note type size requirements.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

SUMMARY-7

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & crossbones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of Practical Treatment or First Aid	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

SUMMARY-8

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	Refer to Appendix II guide PHYS/CHEM
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9B	Misuse statement	All products	Immediately following heading of directions for use		Required statement is: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."
10A	Reentry statement	PR Notice 83-2 or as determined by the Agency	In the directions for use	Immediately after misuse statement	
10B	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from other directions for use. Refer to Appendix II guides STOR, CONT/DIS, and PEST/DIS for further information and required statements.
10C	Directions for use	All products	None	None	May be in metric as well as U.S. units

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicators Certificate.

PRODUCT NAME

ACTIVE INGREDIENT _____ %

INERT INGREDIENTS _____ %

TOTAL _____ %

THIS PRODUCT CONTAINS _____ LBS OF _____ PER GALLON

KEEP OUT OF REACH OF CHILDREN

⚠ DANGER — POISON

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED _____

IF INHALED _____

IF ON SKIN _____

IF IN EYES _____

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS _____

ESTABLISHMENT NO _____

EPA REGISTRATION NO _____

TOWN, STATE _____

WHO BY _____

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS (IF DOMESTIC ANIMALS)

DANGER

ENVIRONMENTAL HAZARDS

PHYSICAL OR CHEMICAL HAZARDS

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

NET CONTENT STATEMENT (If Applicable)

STORAGE AND DISPOSAL

STORAGE _____

DISPOSAL _____

WARRANTY STATEMENT

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cant obtained the data from another firm (identify); applicant copied data from a publication; applicant obtained a copy of the data from EPA).

(d) The applicant shall submit with his application a statement that EPA, in its evaluation of the properties, efficacy, and safety of the formulated end-use product, may not consider any data as supporting the application, except the following data:

(1) The data the applicant has submitted to EPA under paragraph (b) of this section;

(2) Other data pertaining to the safety of the product's active ingredients, rather than to the safety of the end-use product; and

(3) Existing tolerances, food additive regulations, exemptions, and other clearances issued under the Federal Food, Drug, and Cosmetic Act.

(e) If the applicant knows that any item of data he submitted under this section was generated by (or at the expense of) another person who originally submitted the data to EPA (or its predecessor, USDA) on or after January 1, 1970, to support an application for registration, experimental use permit, or amendment adding a new use to an existing registration, or for reregistration (unless the applicant and the original data submitter have reached written agreement on the amount and the terms of payment of any compensation that may be payable under FIFRA section 3(c)(1)(D)(ii) with regard to approval of the application), the applicant shall submit to EPA a statement that he has furnished to each such identified original data submitter:

(1) A notification of the applicant's intent to apply for registration, including the proposed product name;

(2) An offer to pay the person compensation, with regard to the approval of the application, to the extent required by FIFRA sections 3(c)(1)(D) and 3(c)(2)(D);

(3) An identification of the item(s) of data to which the offer applies;

(4) An offer to commence negotiations to ascertain the amount and terms of compensation to be paid; and

(5) The applicant's name, address, and telephone number.

(f) If the applicant's product contains any active ingredient other than those that are present solely because of the incorporation into the product, during formulation, of one or more other registered pesticide products purchased from another producer, then the applicant shall also comply with § 162.9-5 as to such active ingredient, and the application shall contain an acknowledgment that for purposes of FIFRA section 3(c)(1)(D) the application relies on (and any resulting registration should be regarded as if it were based on the Administrator's consideration of) the following data:

(1) All data submitted or specifically cited by the applicant in support of the registration; and

(2) Each other item of data in the Agency's files which:

(i) Concerns the properties or effects of any such active ingredient; and

(ii) Is one of the types of data that EPA would require to be submitted for scientific review by EPA if the applicant sought the initial registration under FIFRA Section 3(c)(5) of a product with composition and intended uses identical to those proposed for the applicant's product, under the data requirements in effect on the date EPA approves the applicant's present application.

(Secs. 3, 6, and 25 of FIFRA, as amended, 7 U.S.C. 136 et seq.)

(44 FR 27853, May 11, 1979)

§ 162.10 Labeling requirements.

(a) *General*—(1) *Contents of the label* Every pesticide products shall bear a label containing the information specified by the Act and the regulations in this Part. The contents of a label must show clearly and prominently the following:

(i) The name, brand, or trademark under which the product is sold as prescribed in paragraph (b) of this section;

(ii) The name and address of the producer, registrant, or person for whom produced as prescribed in paragraph (c) of this section;

(iii) The net contents as prescribed in paragraph (d) of this section;

(iv) The product registration number as prescribed in paragraph (c) of this section;

(v) The producing establishment number as prescribed in paragraph (f) of this section;

(vi) An ingredient statement as prescribed in paragraph (g) of this section;

(vii) Warning or precautionary statements as prescribed in paragraph (h) of this section;

(viii) The directions for use as prescribed in paragraph (i) of this section; and

(ix) The use classification(s) as prescribed in paragraph (j) of this section.

(2) *Prominence and legibility.* (i) All words, statements, graphic representations, designs or other information required on the labeling by the Act or the regulations in this part must be clearly legible to a person with normal vision, and must be placed with such conspicuousness (as compared with other words, statements, designs, or graphic matter on the labeling) and expressed in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use.

(ii) All required label text must:

(A) Be set in 6-point or larger type;

(B) Appear on a clear contrasting background; and

(C) Not be obscured or crowded.

(3) *Language to be used.* All required label or labeling text shall appear in the English language. However, the Agency may require or the applicant may propose additional text in other languages as is considered necessary to protect the public. When additional text in another language is necessary, all labeling requirements will be applied equally to both the English and other-language versions of the labeling.

(4) *Placement of Label.*—(i) General. The label shall appear on or be securely attached to the immediate container of the pesticide product. For purposes of this Section, and the misbranding provisions of the Act, "securely attached" shall mean that a label can reasonably be expected to remain affixed during the foreseeable conditions and period of use. If the immediate container is enclosed within a

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wrapper or outside container through which the label cannot be clearly read, the label must also be securely attached to such outside wrapper or container, if it is a part of the package as customarily distributed or sold.

(ii) *Tank cars and other bulk containers.*—(A) *Transportation.* While a pesticide product is in transit, the appropriate provisions of 49 CFR Parts 170-189, concerning the transportation of hazardous materials, and specifically those provisions concerning the labeling, marking and placarding of hazardous materials and the vehicles carrying them, define the basic Federal requirements. In addition, when any registered pesticide product is transported in a tank car, tank truck or other mobile or portable bulk container, a copy of the accepted label must be attached to the shipping papers, and left with the consignee at the time of delivery.

(B) *Storage.* When pesticide products are stored in bulk containers, whether mobile or stationary, which remain in the custody of the user, a copy of the label of labeling, including all appropriate directions for use, shall be securely attached to the container in the immediate vicinity of the discharge control valve.

(C) *False or misleading statements.*

Pursuant to section 2(g)(1)(A) of the Act, a pesticide or a device declared subject to the Act pursuant to § 162.16, is misbranded if its labeling is false or misleading in any particular including both pesticidal and non-pesticidal claims. Examples of statements or representations in the labeling which constitute misbranding include:

(i) A false or misleading statement concerning the composition of the product;

(ii) A false or misleading statement concerning the effectiveness of the product as a pesticide or device;

(iii) A false or misleading statement about the value of the product for purposes other than as a pesticide or device;

(iv) A false or misleading comparison with other pesticides or devices;

(v) Any statement directly or indirectly implying that the pesticide or device is recommended or endorsed by

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any agency of the Federal Government;

(vi) The name of a pesticide which contains two or more principal active ingredients if the name suggests one or more but not all such principal active ingredients even though the names of the other ingredients are stated elsewhere in the labeling;

(vii) A true statement used in such a way as to give a false or misleading impression to the purchaser;

(viii) Label disclaimers which negate or detract from labeling statements required under the Act and these regulations;

(ix) Claims as to the safety of the pesticide or its ingredients, including statements such as "safe," "nonpoisonous," "noninjurious," "harmless" or "nontoxic to humans and pets" with or without such a qualifying phrase as "(when used as directed)"; and

(x) Non-numerical and/or comparative statements on the safety of the product, including but not limited to:

(A) "Contains all natural ingredients";

(B) "Among the least toxic chemicals known";

(C) "Pollution approved";

(6) *Final printed labeling.* (i) Except as provided in paragraph (a)(6)(ii) of this section, final printed labeling must be submitted and accepted prior to registration. However, final printed labeling need not be submitted until draft label texts have been provisionally accepted by the Agency.

(ii) Clearly legible reproductions or photo reductions will be accepted for unusual labels such as those screened directly onto glass or metal containers or large bag or drum labels. Such reproductions must be of microfilm reproduction quality.

(b) *Name, brand, or trademark.* (1) The name, brand, or trademark under which the pesticide product is sold shall appear on the front panel of the label.

(2) No name, brand, or trademark may appear on the label which:

(i) Is false or misleading; or

(ii) Has not been approved by the Administrator through registration or supplemental registration as an additional name pursuant to § 162.9(k)(4).

(c) *Name and address of producer, registrant, or person for whom produced.* An unqualified name and address given on the label shall be considered as the name and address of the producer. If the registrant's name appears on the label and the registrant is not the producer, or if the name of the person for whom the pesticide was produced appears on the label, it must be qualified by appropriate wording such as "Packed for . . ." "Distributed by . . ." or "Sold by . . ." to show that the name is not that of the producer.

(d) *Net weight or measure of contents.* (1) The net weight or measure of content shall be exclusive of wrappers or other materials and shall be the average content unless explicitly stated as a minimum quantity.

(2) If the pesticide is a liquid, the net content statement shall be in terms of liquid measure at 68° F (20° C) and shall be expressed in conventional American units of fluid ounces, pints, quarts, and gallons.

(3) If the pesticide is solid or semisolid, viscous or pressurized, or is a mixture of liquid and solid, the net content statement shall be in terms of weight expressed as avoirdupois pounds and ounces.

(4) In all cases, net content shall be stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "30 ounces."

(5) In addition to the required units specified, net content may be expressed in metric units.

(6) Variation above minimum content or around an average is permissible only to the extent that it represents deviation unavoidable in good manufacturing practice. Variation below a stated minimum is not permitted. In no case shall the average content of the packages in a shipment fall below the stated average content.

(e) *Product registration number.* The registration number assigned to the pesticide product at the time of registration shall appear on the label, preceded by the phrase "EPA Registration No.," or the phrase "EPA Reg. No." The registration number shall be set in type of a size and style similar to other print on that part of the label on which it appears and shall run par-

allel to it. The registration number and the required identifying phrase shall not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency.

(f) *Producing establishments registration number.* The producing establishment registration number preceded by the phrase "EPA Est." of the final establishment at which the product was produced may appear in any suitable location on the label or immediate container. It must appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container.

(g) *Inherent statement.*—(1) *General.* The label of each pesticide product must bear a statement which contains the name and percentage by weight of each active ingredient, the total percentage by weight of all inert ingredients; and if the pesticide contains arsenic in any form, a statement of the percentages of total and water-soluble arsenic calculated as elemental arsenic. The active ingredients must be designated by the term "active ingredients" and the inert ingredients by the term "inert ingredients," or the singular forms of these terms when appropriate. Both terms shall be in the same type size, be aligned to the same margin and be equally prominent. The statement "Inert ingredients, none" is not required for pesticides which contain 100 percent active ingredients. Unless the ingredient statement is a complete analysis of the pesticide, the term "analysis" shall not be used as a heading for the ingredient statement.

(2) *Position of ingredient statement.* The ingredient statement is normally required on the front panel of the label. If there is an outside container or wrapper through which the ingredient statement cannot be clearly read, the ingredient statement must also appear on such outside container or wrapper. If the size or form of the package makes it impracticable to place the ingredient statement on the front panel of the label, permission may be granted for the ingredient statement to appear elsewhere.

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(ii) The text of the ingredient statement must run parallel with other text on the panel on which it appears, and must be clearly distinguishable from and must not be placed in the body of other text.

(3) *Names to be used in ingredient statement.* The name used for each ingredient shall be the accepted common name. If there is one, followed by the chemical name. The common name may be used alone only if it is well known. If no common name has been established, the chemical name alone shall be used. In no case will the use of a trademark or proprietary name be permitted unless such name has been accepted as a common name by the Administrator under the authority of Section 25(c)(6).

(4) *Statements of percentages.* The percentages of ingredients shall be stated in terms of weight-to-weight. The sum of percentages of the active and the inert ingredients shall be 100. Percentages shall not be expressed by a range of values such as "23-25%." If the uses of the pesticide product are expressed as weight of active ingredient per unit area, a statement of the weight of active ingredient per unit volume of the pesticide formulation shall also appear in the ingredient statement.

(5) *Accuracy of stated percentages.* The percentages given shall be as precise as possible reflecting good manufacturing practice. If there may be unavoidable variation between manufacturing batches, the value stated for each active ingredient shall be the lowest percentage which may be present.

(6) *Declaration.* Pesticides which change in chemical composition significantly must meet the following labeling requirements:

(i) In cases where it is determined that a pesticide formulation changes chemical composition significantly, the product must bear the following statement in a prominent position on the label: "Not for sale or use after [date]."

(ii) The product must meet all label claims up to the expiration time indicated on the label.

(7) *Inert ingredients.* The Administrator may require the name of any

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inert ingredient(s) to be listed in the inherent statement if he determines that such ingredient(s) may pose a hazard to man or the environment.

(b) *Warnings and precautionary statements.* Required warnings and precautionary statements concerning the general areas of toxicological hazard including hazard to children, environmental hazard, and physical or chemical hazard fall into two groups: those required on the front panel of the labeling and those which may

appear elsewhere. Specific requirements concerning content, placement, type size, and prominence are given below.

(1) *Required front panel statements.* With the exception of the child hazard warning statement, the text required on the front panel of the label is determined by the Toxicity Category of the pesticide. The category is assigned on the basis of the highest hazard shown by any of the indicators in the table below:

Hazard indicator	I	II	III	IV
Oral LD ₅₀	Up to and including 50 mg/kg	From 50 to 500 mg/kg	From 500 to 5,000 mg/kg	From 5,000 to 50,000 mg/kg
Inhalation LC ₅₀	Up to and including 2 mg/liter	From 2 to 20 mg/liter	From 20 to 200 mg/liter	From 200 to 2,000 mg/liter
Dermal LD ₅₀	Up to and including 200 mg/kg	From 200 to 2,000 mg/kg	From 2,000 to 20,000 mg/kg	From 20,000 to 200,000 mg/kg
Eye effects	Corneal opacity, corneal vascularization, conjunctivitis within 7 days	Corneal opacity, corneal vascularization, conjunctivitis within 7 days	Corneal opacity, corneal vascularization, conjunctivitis within 7 days	Corneal opacity, corneal vascularization, conjunctivitis within 7 days
Skin effects	Corrosive	Severe irritation at 7 days	Moderate irritation at 7 days	Mild or slight irritation at 7 days

(1) *Highest hazard signal word.*—(A) *Toxicity Category I.* All pesticide products meeting the criteria of Toxicity Category I shall bear on the front panel the signal word "Danger." In addition if the product was assigned to Toxicity Category I on the basis of its oral, inhalation or dermal toxicity (as distinct from skin and eye local effects) the word "Poison" shall appear in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word "Poison."

(B) *Toxicity Category II.* All pesticide products meeting the criteria of Toxicity Category II shall bear on the front panel the signal word "Warning."

(C) *Toxicity Category III.* All pesticide products meeting the criteria of Toxicity Category III shall bear on the front panel the signal word "Caution."

(D) *Toxicity Category IV.* All pesticide products meeting the criteria of Toxicity Category IV shall bear on the front panel the signal word "Caution."

(E) *Use of signal words.* Use of any signal word(s) associated with a higher

Toxicity Category is not permitted except when the Agency determines that such labeling is necessary to prevent unreasonable adverse effects on man or the environment. In no case shall more than one human hazard signal word appear on the front panel of a label.

(2) *Child hazard warning.* Every pesticide product label shall bear on the front panel the statement "Keep out of reach of children." Only in cases where the likelihood of contact with children during distribution, marketing, storage or use is demonstrated by the applicant to be extremely remote, or if the nature of the pesticide is such that it is approved for use on infants or small children, may the Administrator waive this requirement.

(3) *Statement of practical treatment.*—(A) *Toxicity Category I.* A statement of practical treatment (first aid or other) shall appear on the front panel of the label of all pesticides falling into Toxicity Category I on the basis of oral, inhalation or dermal toxicity. The Agency may, however, permit reasonable variations in the placement of the statement of practical

cal treatment is some reference such as "See statement of practical treatment on back panel" appears on the front panel near the word "Poison" and the skull and crossbones.

(B) *Other toxicity categories.* The statement of practical treatment is not required on the front panel except as described in paragraph (h)(1)(III)(A) of this section. The applicant may, however, include such a front panel statement at his option. Statements of practical treatment are, however, required elsewhere on the label in accordance with paragraph (h)(2) of this section if they do not appear on the front panel.

(iv) *Placement and prominence.* All the require front panel warning statements shall be grouped together on the label, and shall appear with sufficient prominence relative to other front panel text and graphic material to make them unlikely to be overlooked under customary conditions of purchase and use. The following table shows the minimum type size requirements for the front panel warning statements on various sizes of labels:

Title 40—Protection of Environment

Size of label (area of label in square inches)	Points	
	Required minimum size of type, at least	Minimum size of type, at least
3 and under	6	6
Above 3 to 10	8	8
Above 10 to 15	10	10
Above 15 to 30	12	12
Above 30	14	14
Over 30	16	16

(2) *Other required warnings and precautionary statements.* The warnings and precautionary statements as required below shall appear together on the label under the general heading "Precautionary Statements" and under appropriate subheadings of "Hazard to Humans and Domestic Animals," "Environmental Hazard," and "Physical or Chemical Hazard."

(i) *Hazard to humans and domestic animals.* (A) Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. The precautionary paragraph shall be immediately preceded by the appropriate hazard signal word.

(B) The following table depicts typical precautionary statements. These statements must be modified or expanded to reflect specific hazards.

Toxicity category	Precautionary statements by toxicity category	
	Oral, inhalation, or dermal toxicity	Skin and eye test effects
I	Read label carefully if swallowed (indicated or suspected through skin). Do not breathe vapor (dust or spray mist). Do not get in eyes, on skin, or on clothing. (Front panel statement of practical treatment required.)	Caution, severe eye and skin damage (or skin irritation). Do not get in eyes, on skin, or on clothing. Do not breathe vapor (dust or spray mist) when handling. Wash hands and face after use. (Appropriate first aid statement required.)
II	May be fatal if swallowed (indicated or suspected through skin). Do not breathe vapor (dust or spray mist). Do not get in eyes, on skin, or on clothing. (Front panel statement of practical treatment required.)	Caution eye (and skin) irritation. Do not get in eyes, on skin, or on clothing. Wash hands and face after use. (Appropriate first aid statement required.)
III	Hazardous if swallowed (indicated or suspected through skin). Avoid breathing vapor (dust or spray mist). Avoid contact with skin, eyes or clothing in case of contact. (Front panel statement of practical treatment required.)	Avoid contact with skin, eyes or clothing in case of contact. (Front panel statement of practical treatment required.)
IV	Avoid contact with skin (eyes or clothing). (Appropriate first aid statement required.)	(No precautionary statements required.)

(ii) *Environmental hazards.* Where a hazard exists to non target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident,

(A) If a pesticide intended for outdoor use contains an active ingredient with a mammalian acute oral LD₅₀ of

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100 or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(B) If a pesticide intended for outdoor use contains an active ingredient with a fish acute LC₅₀ of 1 ppm or less, the statement "This Pesticide is Toxic to Fish" is required.

(C) If a pesticide intended for outdoor use contains an active ingredient with an avian acute oral LD₅₀ of 100 mg/kg or less, or a subacute dietary LC₅₀ of 500 ppm or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(D) If either accident history or field studies demonstrate that use of the pesticide may result in fatality to birds, fish or mammals, the statement

"This pesticide is extremely toxic to wildlife (fishy)" is required.

(F) For uses involving foliar application to agricultural crops, forests, or shade trees, or for mosquito abatement treatments, pesticides toxic to pollinating insects must bear appropriate label cautions.

(F) For all outdoor uses other than aquatic applications the label must bear the caution "Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment or disposal of wastes."

(iii) *Physical or chemical hazards.* Warning statements on the flammability or explosive characteristics of the pesticide are required as follows:

Flash point	Required text	
	(A) Prepackaged Containers	(B) Nonpackaged Containers
Flash point at or below 20° F; it there is a likelihood of any value appearing	Extremely flammable. Contains under pressure. Keep away from fire. Do not breathe vapor (dust or spray mist). Do not get in eyes, on skin, or on clothing. Exposure to temperatures above 130° F may cause rupture.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
Flash point above 20° F and not over 60° F or if the liquid or solid is more than 16 in. long at a distance of 6 ft from the flame	Flammable. Contains under pressure. Keep away from heat, sparks, and open flame. Do not breathe or get in eyes, on skin, or on clothing. Exposure to temperatures above 130° F may cause rupture.	Flammable. Keep away from heat and open flame.
All other prepackaged containers	Do not breathe or get in eyes, on skin, or on clothing. Exposure to temperatures above 130° F may cause rupture.	Do not use or store near heat or open flame.

(i) *Directions for Use—(1) General requirements—(i) Adequacy and clarity of directions.* Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment.

(ii) *Placement of directions for use.* Directions may appear on any portion of the label provided that they are conspicuous enough to be easily read by the user of the pesticide product. Directions for use may appear on printed or graphic matter which accompanies the pesticide provided that:

(A) If required by the Agency, such printed or graphic matter is securely attached to each package of the pesticide, or placed within the outside wrapper or bag;

(B) The label bears a reference to the directions for use in accompanying leaflets or circulars, such as "See directions in the enclosed circular;" and

(C) The Administrator determines that it is not necessary for such directions to appear on the label.

(iii) *Exceptions to requirement for direction for use—(A) Detailed directions for use may be omitted from labeling of pesticides which are intended for use only by manufacturers of products other than pesticide products in their regular manufacturing processes, provided that:*

(1) The label clearly shows that the product is intended for use only in manufacturing processes and specifies the type(s) of products involved.

(2) Adequate information such as technical data, sheets or bulletins, is available to the trade specifying the type of product involved and its proper use in manufacturing processes.

(3) The product will not come into the hands of the general public except after incorporation into finished products.

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

(5) Detailed directions for use may be omitted from the labeling of pesticide products for which sale is limited to physicians, veterinarians, or druggists, provided that:

(1) The label clearly states that the product is for use only by physicians or veterinarians;

(2) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment; and

(3) The product is also a drug and regulated under the provisions of the Federal Food, Drug and Cosmetic Act.

(C) Detailed directions for use may be omitted from the labeling of pesticide products which are intended for use only by formulators in preparing pesticides for sale to the public, provided that:

(1) There is information readily available to the formulators on the composition, toxicity, methods of use, applicable restrictions or limitations, and effectiveness of the product for pesticide purposes;

(2) The label clearly states that the product is intended for use only in manufacturing, formulating, mixing, or repackaging for use as a pesticide and specifies the type(s) of pesticide product involved;

(3) The product is finally manufactured, formulated, mixed, or repackaged is registered; and

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

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(3) Contents of Directions for Use. The directions for use shall include the following, under the headings "Directions for Use":

(i) The statement of use classification as prescribed in § 162.10(j) immediately under the heading "Directions for Use."

(ii) Immediately below the statement of use classification, the statement "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."

(iii) The (dicta) of application, as for example the crops, animals, areas, or objects to be treated.

(iv) The target pests associated with each site.

(v) The dosage rate associated with each site and pest.

(vi) The method of application, including instructions for dilution, if required, and type(s) of application apparatus or equipment required.

(vii) The frequency and timing of applications necessary to obtain effective results without causing unreasonable adverse effects on the environment.

(viii) Specific limitations on reentry to areas where the pesticide has been applied, meeting the requirements concerning reentry provided by 40 CFR Part 176.

(ix) Specific directions concerning the storage and disposal of the pesticide and its container, meeting the requirements of 40 CFR Part 166. These instructions shall be grouped and appear under the heading "Storage and Disposal." This heading must be set in type of the same minimum size as required for the child hazard warning (see Table in § 162.10(h)(1)(iv)).

(x) Any limitations or restrictions on use required to prevent unreasonable adverse effects, such as:

(A) Required intervals between application and harvest of food or feed crops.

(B) Rotational crop restrictions.

(C) Warnings as required against use on certain crops, animals, objects, or in or adjacent to certain areas.

(D) (Reserved)

(E) For restricted use pesticides, a statement that the pesticide may be applied under the direct supervision of a certified applicator who is not physically present at the site of application

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but, nonetheless, available to the person applying the pesticide, unless the Agency has determined that the pesticide may only be applied under the direct supervision of a certified applicator who is physically present.

(F) Other pertinent information which the Administrator determines to be necessary for the protection of man and the environment.

(j) Statement of Use Classification. By October 22, 1976, all pesticide products must bear on their label a statement of use classification as described in paragraphs (j)(1) and (2) of this section. Any pesticide product for which some uses are classified for general use and others for restricted use shall be separately labeled according to the labeling standards set forth in this sub-section, and shall be marketed as separate products with different registration numbers, one bearing directions only for general use(s) and the other bearing directions for restricted use(s) except that, if a product has both restricted use(s) and general use(s), both of these uses may appear on a product labeled for restricted use. Such products shall be subject to the provisions of § 162.10(j)(2).

(1) General Use Classification. Pesticide products bearing directions for use(s) classified general shall be labeled with the exact words "General Classification" immediately below the heading "Directions for Use." And reference to the general classification that suggests or implies that the general utility of the pesticide extends beyond those purposes and uses contained in the Directions for Use will be considered a false or misleading statement under the statutory definitions of misbranding.

(2) Restricted Use Classification. Pesticide products bearing directions for use(s) classified restricted shall bear statements of restricted use classification on the front panel as described below:

(i) Front panel statement of restricted use classification. (A) At the top of the front panel of the label, set in type of the same minimum size as required for human hazard signal words (see Table in § 162.10(h)(1)(iv)), and appearing with sufficient prominence relative to other text and graphic material on

the front panel to make it unlikely to be overlooked under customary conditions of purchase and use, the statement "Restricted Use Pesticide" shall appear.

(B) Directly below this statement on the front panel, a summary statement of the terms of restriction imposed as a precondition to registration shall appear. If use is restricted in certified applications, the following statement is required: "For retail sale and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification." If, however, other regulatory restrictions are imposed, the Administrator will define the appropriate wording for the terms of restriction by regulation.

(k) Advertising. (Reserved)

(40 FR 20298, July 3, 1975; 40 FR 23239, Aug. 21, 1975; 40 FR 30571, Aug. 21, 1975, as amended at 43 FR 5796, Feb. 9, 1978)

§ 162.11 Criteria for determination of unreasonable adverse effects.

(a) Criteria for Issuance of Notice of Intent to Deny Registration, Cancel Registration, or to Hold a Hearing-- (1) Presumption. (i) A rebuttable presumption shall arise that a notice of intent to deny registration pursuant to section 3(c)(6) of the Act, a notice of intent to cancel registration pursuant to section 3(b)(1) of the Act, or a notice of intent to hold a hearing to determine whether the registration should be cancelled or denied, as appropriate, shall be issued, upon a determination by the Administrator that the pesticide a) is or exceeds any of the criteria for restriction set forth in paragraph (a)(3) of this section. Upon such determination, the Administrator shall issue notice by certified mail to the applicant or registrant, as the case may be, stating that the opportunity to submit evidence in rebuttal of such presumption in accordance with paragraph (a)(4) of this section. The applicant or registrant shall have forty-five days from the date such notice is sent to submit evidence in rebuttal of the presumption; provided, however, that for good cause shown the Administrator may grant an additional sixty

PHYSICAL-CHEMICAL HAZARDS

Criteria

Required Label Statement

I. Pressurized Containers

- | | |
|---|---|
| A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening. | Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. |
| B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening. | Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. |
| C. <u>ALL OTHER PRESSURIZED CONTAINERS</u> | Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting. |

II. Non-Pressurized Containers

- | | |
|---|--|
| A. Flashpoint at or below 20°F. | Extremely flammable. Keep away from fire, sparks, and heated surfaces. |
| B. Flashpoint above 20°F and not over 80°F. | Flammable. Keep away from heat and open flame. |
| C. Flashpoint over 80°F and not over 150°F. | Do not use or store near heat and open flame. |
| D. Flashpoint above 150°F. | None required. |

STOR-1

STORAGE INSTRUCTIONS FOR PESTICIDES

Heading:

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL."

Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.
2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.
3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.
4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.
5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.
6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

PEST/DIS-1

PESTICIDE DISPOSAL INSTRUCTIONS

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients that are Acute Hazardous Wastes or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

"Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

3. The labels of all products, except those intended for domestic use, containing active or inert ingredients that are Toxic Hazardous Wastes or meet any of the criteria in 40 CFR 261, Subpart C for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

4. Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

5. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

CONT/DIS-1

CONTAINER DISPOSAL INSTRUCTIONS

The label of each product must bear container disposal instructions appropriate to the type of container.

1. Domestic use products must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. All other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused ¹ , dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording)

^{1/} Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

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ACEPHATE*

TYPE PESTICIDE: Insecticide, Acaricide**FORMULATIONS:** Tech (97%); FI (75%, 85%); G (1.5%); P/T (85%); SC/S (75%, 80%, 85%); SC/L (9.4%, 15.6%, 97%); PrL (3%)

GENERAL WARNINGS AND LIMITATIONS: Do not discharge effluent containing acephate intended for manufacturing use into lakes, streams, ponds, estuaries, oceans or public waters unless acephate is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing acephate to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact the State Water Board or Regional Office of the Environmental Protection Agency.

Protective Clothing Statement:

- a. When acephate is used on agricultural crops, commercially grown ornamentals, commercial or governmental forestry seed crops, and in greenhouses (except for the ready-to-use tree injection cartridge), wear the following protective clothing and equipment during mixing/loading, application, repair, and cleaning of mixing, loading, and application equipment, disposal of the pesticide, and early reentry into treated areas: chemical-resistant gloves, long sleeved shirt, long legged pants, shoes, and socks. If overhead exposure is likely, such as during flagging, wear a hood or wide-brimmed hat. Always wash hands, face, and arms with soap and water before smoking, eating, drinking or toileting. Before removing gloves, wash them with soap and water. Wear only clean clothes when leaving job--do not wear contaminated clothing. Personal clothing worn during work must be laundered separately from protective clothing and household articles. Store protective clothing separately from personal clothing. Clean or launder protective clothing after each use.
- b. When handling acephate for use around the home (except for those to be used as a ready-to-use aerosol), wear chemical resistant gloves, long pants, and long sleeved shirt. Spray with the wind to the back and do not use when wind speeds are 10 miles per hour or more. Wash the outside of the gloves with soap and water before removing.

Reentry Interval Statement:

When acephate is used on agricultural crops, commercially grown ornamentals, commercial or governmental forestry seed production, and in greenhouses (except for the ready-to-use tree injection cartridge), reentry into treated areas is prohibited for 24 hours after the end of application, unless protective clothing is worn.

Bee Caution:

Acephate is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply acephate or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Livestock and Poultry Tolerances:

0.1 ppm in eggs, milk, and the meat, fat, and meat byproducts of cattle, goats, hogs, horses, poultry, and sheep.

Agricultural Crop Tolerances:

Macadamia Nuts - 0.05 ppm

*O,S-dimethyl acetylphosphoramidothioate

Issued: 7-22-80

III-103301-1

Provisional Update: 8-19-87

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ACEPHATE

Site and Pest

Dosages and Tolerance, Use, Limitations
Formulation(s)

AGRICULTURAL CROPS

General Warnings and Limitations: Do not reenter treated fields for 24 hours after application unless protective clothing is worn. Acephate is toxic to birds. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

/1500100	<u>Beans, Dried Type</u>		3 ppm (succulent and dry form) (of which no more than 1 ppm is O,S-dimethyl phosphoramidothioate) 14 day preharvest interval through 1 pound per acre for foliar application. Do not feed treated vines to livestock.
0ITASAEA #1500101 &075.0015	Bean leafroller	0.5 lb/A (75% SC/S)	Foliar application. Repeat as needed.
0IRAFAAA #1500101 &075.0015	Leafhoppers	0.5-1 lb/A (75% SC/S)	Use limited to WI and east of the Mississippi river. Foliar application. Apply in 20 to 100 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 to 10 day intervals as needed.
0IQAMARA #1500101 &075.0015 I9001500	Lygus bugs	0.5 lb/A (75% SC/S)	Use limited to CA. Foliar application. Apply 5 to 10 gallons of finished product per acre by aircraft or in 20 to 100 gallons of water per acre by ground equipment.
0INAPAF A #1500101 &075.0015	Mexican bean beetle	0.5 lb/A (75% SC/S)	Use limited to NC, SC, and VA. Foliar application. Repeat as needed.
0ITBCCGA #1500101 &075.0015	Soybean looper	0.5 lb/A (75% SC/S)	Use limited to FL. Foliar application. Repeat as needed.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/1500200 <u>Beans, Succulent (lima)</u>		3 ppm (succulent and dry form) (of which no more than 1 ppm is 0,S-dimethyl phosphoramidothioate) 0 day preharvest interval through 1 pound per acre for foliar application. Do not feed treated vines to livestock.
@ITASAEA \$1500201 &075.0015	Bean leafroller 0.5 lb/A (75% SC/S)	Foliar application. Repeat as needed.
@IRAFAAA \$1500201 &075.0015	Leafhoppers 0.5-1 lb/A (75% SC/S)	Use limited to WI and east of the Mississippi river. Foliar application. Apply in 20 to 100 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 to 10 day intervals as needed.
@IQAMARA \$1500201 &075.0015 I9001500	Lygus bugs 0.5 lb/A (75% SC/S)	Use limited to CA. Foliar application. Apply 5 to 10 gallons of finished product per acre by aircraft or in 20 to 100 gallons of water per acre by ground equipment.
@INAPAF A \$1500201 &075.0015	Mexican bean beetle 0.5 lb/A (75% SC/S)	Use limited to NC, SC, and VA. Foliar application. Repeat as needed.
@ITBCCGA \$1500201 &075.0015	Soybean looper 0.5 lb/A (75% SC/S)	Use limited to FL. Foliar application. Repeat as needed.
/1500300 <u>Beans, Succulent (other than lima)</u>		3 ppm (succulent and dry form) (of which no more than 1 ppm is 0,S-dimethyl phosphoramidothioate) 14 day preharvest interval through 1 pound per acre for foliar application. Do not feed treated vines to livestock.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Beans, Succulent (other than lima) (continued)</u>		
@ITASAEA #1500301 &075.0015	Bean leafroller 0.5 lb/A (75% SC/S)	Foliar application. Repeat as needed.
@IRAFAAA #1500301 &075.0015	Leafhoppers 0.5-1 lb/A (75% SC/S)	Use limited to WI and east of the Mississippi river. Foliar application. Apply in 20 to 100 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 to 10 day intervals as needed.
@IQAMARA #1500301 &075.0015 I9001500	Lygus bugs 0.5 lb/A (75% SC/S)	Use limited to CA. Foliar application. Apply 5 to 10 gallons of finished product per acre by aircraft or in 20 to 100 gallons of water per acre by ground equipment.
@INAPAF A #1500301 &075.0015	Mexican bean beetle 0.5 lb/A (75% SC/S)	Use limited to NC, SC, and VA. Foliar application. Repeat as needed.
@ITBCCGA #1500301 &075.0015	Soybean looper 0.5 lb/A (75% SC/S)	Use limited to FL. Foliar application. Repeat as needed.
<u>Brussels Sprouts</u>		3.0 ppm This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.
<u>Cauliflower</u>		2.0 ppm This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2800300 <u>Celery</u>		10 ppm (of which no more than 1 ppm is O,S-dimethyl phosphoramidothio-ate) 21 day preharvest interval through 1 pound per acre for foliar application. Use limited to CA and FL. Apply in 50 to 100 gallons of water by ground equipment. Apply when pest first appears. Maintain a 3 to 7 day spray schedule in FL and 3 to 10 day schedule in CA until pests are below economic numbers. Plants should be marketed trimmed (tops removed) before shipping or use. Tops should not be used for food or feed.
●ITBCCNA #2800301 &075.0015 Beet armyworm	1 lb/A (75% SC/S)	Foliar application.
●ITBCCSA #2800301 &075.0015 Cabbage looper	1 lb/A (75% SC/S)	Foliar application.
●ITBCCOA #2800301 &075.0015 Fall armyworm	1 lb/A (75% SC/S)	Foliar application.
●IRACCUA #2800301 &075.0015 Green peach aphid	0.5-1 lb/A (75% SC/S)	Foliar application.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2800700 19001500	<u>Cotton</u>		2 ppm (cottonseed) 4 ppm (cottonseed hulls) 8 ppm (cottonseed meal) 21 day preharvest interval through 1 pound per acre for foliar application. Seed treatment through 0.4 pound per 100 pounds seed. Apply in 3 to 10 gallons of water per acre by aircraft or in 10 to 25 gallons of water per acre by ground equipment in southern states. Apply in 5 to 10 gallons of water per acre by aircraft in AZ and CA. Do not feed threshings to livestock or allow animals to graze on treated areas.
①ITBCCFA #2800701 &075.0015	Armyworm	1 lb/A (75% SC/S)	Foliar application.
①ITBCALA #2800709 &080.0015	Black cutworm	0.4 lb/100 lb seed (80% SC/S)	Seed treatment. Apply in sufficient water for thorough coverage. Claims for control are limited to reduction of pest from planting through the 3 to 4 leaf stage of development. When planting seed into fields where large cutworms are present (fifth instar and larger) economic damage may occur. Treated seed must not be used for or mixed with food or animal feed, or processed for oil. Treated seed must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.
①ITBCBOA #2800701 &075.0015	Bollworm	0.5 lb/A (75% SC/S)	Use limited to AL, AR, FL, GA, LA, MS, and TX. Foliar application. Apply in early season under light infestation.
&075.0015		0.75-1 lb/A (75% SC/S)	Use limited to AL, AR, FL, GA, LA, MS, and TX. Foliar application. Apply in mid and late season as infestation becomes moderate to severe.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cotton (continued)</u>		
&075.0015	1 lb/A (75% SC/S)	Use limited to AZ and CA. Foliar application. Apply when eggs appear in the field and repeat at 3 to 7 day intervals.
@ITBCCSA \$2800701 &075.0015	Cabbage looper 1 lb/A (75% SC/S)	Foliar application.
@IRACAOA \$2800709 &080.0015	Cotton aphid 0.4 lb/100 lb seed (80% SC/S)	Seed treatment. Apply in sufficient water for thorough coverage. Claims for control are limited to reduction of pest from emergence to about 4 to 6 leaf stage. Treated seed must not be used for or mixed with food or animal feed, or processed for oil. Treated seed must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.
@IQAMBDA \$2800701 &075.0015	Fleahoppers 0.25 lb/A (75% SC/S)	Foliar application.
@IQAMARA \$2800701 &075.0015	Lygus bugs 0.25-1 lb/A (75% SC/S)	Foliar application.
@IOACAH \$2800709 &080.0015	Seedcorn maggot 0.4 lb/100 lb seed (80% SC/S)	Seed treatment. Apply in sufficient water for thorough coverage. Claims for control are limited to feeding reduction of pest on germinating and emerging cotton seedlings. Treated seed must not be used for or mixed with food or animal feed, or processed for oil. Treated seed must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.
@IMOAAAA \$2800701 &075.0015	Thrips 1.5-3 oz/A (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cotton</u> (continued)		
#2800709 #080.0015	0.4 lb/100 lb seed (80% SC/S)	Seed treatment. Apply in sufficient water for thorough coverage. Claims for control are limited to reduction of pest from emergence to about 4 to 6 leaf stage. Treated seed must not be used for or mixed with food or animal feed, or processed for oil. Treated seed must be colored to distinguish and prevent subsequent inadvertent use as a food for man or feed for animals.
#ITBCBNA Tobacco budworm		Foliar application.
PITBCBOA		Refer to Bollworm for use and limitation information.
#IRABAAA Whiteflies #2800701 #075.0015	0.5-1 lb/A (75% SC/S)	Foliar application.
<u>Cranberries</u>		0.5 ppm This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
1302800 9001500	<u>Lettuce, Crisphead Types</u>	10 ppm (head lettuce) (of which no more than 1 ppm is O,S-dimethyl phosphoramidothioate) 21 day preharvest interval through 1 pound per acre for foliar application per single application. Do not apply more than 5 pounds per acre per growing season. Apply 5 to 10 gallons of finished spray per acre by aircraft or 10 to 60 gallons of finished spray per acre by ground equipment. Apply when pest first appears and repeat as needed. Do not apply after first head begins to form. Do not feed trimmings to livestock or allow animals to graze on treated areas.
91TBCCFA 91302801 9075.0015	Armyworm 1 lb/A (75% SC/S)	Foliar application.
91TBCCSA 91302801 9075.0015	Cabbage looper 1 lb/A (75% SC/S)	Foliar application.
91IRACCUA 91302801 9075.0015	Green peach aphid 0.5-1 lb/A (75% SC/S)	Foliar application.
	<u>Pastures</u>	15 ppm (grass, forage and hay) This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations. Do not graze or feed grass or grass hay to dairy animals.
	<u>Peanuts</u>	0.2 ppm 5.0 ppm (peanut hulls) This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
1100300 <u>Pepper, Bell</u>		4 ppm (all types) (of which no more than 1 ppm is O,S-dimethyl phosphoramidothioate) 7 day preharvest interval through 1 pound per acre for foliar application. Apply in 25 to 150 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 to 10 day intervals.
ITBMCCA 1100301 1075.0015 European corn borer	0.75-1 lb/A (75% SC/S)	Foliar application.
IRACCUA 1100301 1075.0015 Green peach aphid	0.5 lb/A (75% SC/S)	Foliar application.
<u>Peppermint</u>		15 ppm (mint hay) This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations. Do not use spent mint hay for feed for dairy animals.
<u>Pistachio Orchards</u> (nonbearing) (grass and broadleaf weed cover crops)		N.F. This use only occurs on Special Local Need [24(c)] labeling and has not been included in this entry. Refer to appropriate labeling for use information and limitations.
<u>Rangeland</u>		15 ppm (grass, forage and hay) This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations. Do not graze or feed grass or grass hay to dairy animals. Acephate is toxic to birds. Applications may adversely affect birds in treatment areas. Do not apply directly to water or wetlands except under forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/2802300 I9001500 <u>Soybeans</u>		1 ppm 4 ppm (soybean meal) 14 day preharvest interval through 1 pound per acre for foliar application. Apply in 2 to 10 gallons of water per acre by aircraft or in 10 to 50 gallons of water per acre by ground equipment. Do not graze or cut vines for hay or forage.
①ITBCCFA #2802301 &075.0015 <u>Armyworm</u>	0.75-1 lb/A (75% SC/S)	Foliar application.
①INAMARA #2802301 &075.0015 <u>Bean leaf beetle</u>	0.5-1 lb/A (75% SC/S)	Foliar application.
①ITBCCSA #2802301 &075.0015 <u>Cabbage looper</u>	0.5-1 lb/A (75% SC/S)	Foliar application.
①ITBCBOA #2802301 &075.0015 <u>Corn earworm</u>	0.75-1 lb/A (75% SC/S)	Foliar application.
①IVABAAA #2802301 &075.0015 <u>Grasshoppers</u>	0.25-0.5 lb/A (75% SC/S)	Foliar application.
①ITBCCCA #2802301 &075.0015 <u>Green cloverworm</u>	0.5-1 lb/A (75% SC/S)	Foliar application.
①INAPafa #2802301 &075.0015 <u>Mexican bean beetle</u>	0.5-1 lb/A (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Soybeans (continued)</u>		
●ITBCCGA #2802301 &075.0015	Soybean looper	0.5-1 lb/A (75% SC/S)
		Foliar application.
●IQAQAAA #2802301 &075.0015	Stink bugs	0.75-1 lb/A (75% SC/S)
		Foliar application.
●IRASADA #2802301 &075.0015	Threecornered alfalfa hopper	0.75-1 lb/A (75% SC/S)
		Foliar application.
●ITBCATA #2802301 &075.0015	Velvetbean caterpillar	0.5-1 lb/A (75% SC/S)
		Foliar application.
<u>Soybeans (seed treatment)</u>		1 ppm 4 ppm (soybean meal) This use only occurs on Special Local Need [24(c)] labeling and has not been included in this entry. Refer to appropriate labeling for use information and limitations.
<u>Spearmint</u>		15 ppm (mint hay) This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations. Do not use spent mint hay for feed for dairy animals.
/2600500 I9001500	<u>Tobacco, Air Cured</u>	N.F. 3 day preharvest interval through 0.75 pound per acre for foliar application. Apply in a minimum of 3 gallons of water per acre by aircraft or in 10 to 50 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 day intervals. Do not reenter sprayed areas until spray deposit has dried.
●ITBCCSA #2600501 &075.0015	Cabbage looper	0.75 lb/A (75% SC/S)
		Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Tobacco, Air Cured</u> (continued)		
•IVABAAA #2600501 &075.0015	Grasshoppers	0.25-0.5 lb/A Foliar application. (75% SC/S)
•IRACCUA #2600501 &075.0015	Green peach aphid	0.5 lb/A Foliar application. (75% SC/S)
•ITBCBNA #2600501 &075.0015	Tobacco budworm	0.75 lb/A Foliar application. (75% SC/S)
•INAMBUA #2600501 &075.0015	Tobacco flea beetle	0.5 lb/A Foliar application. (75% SC/S)
•ITBRAKA #2600501 &075.0015	Tobacco hornworm	0.5 lb/A Foliar application. (75% SC/S)
/2600600 I9001500	<u>Tobacco, Flue Cured</u>	N.F. 3 day preharvest interval through 0.75 pound per acre for foliar ap- plication. Apply in a minimum of 3 gallons of water per acre by aircraft or in 10 to 50 gallons of water per acre by ground equipment. Apply when pest first appears and repeat at 7 day intervals. Do not reenter sprayed areas until spray deposit has dried.
•ITBCCSA #2600601 &075.0015	Cabbage looper	0.75 lb/A Foliar application. (75% SC/S)
•IVABAAA #2600601 &075.0015	Grasshoppers	0.25-0.5 lb/A Foliar application. (75% SC/S)
•IRACCUA #2600601 &075.0015	Green peach aphid	0.5 lb/A Foliar application. (75% SC/S)
•ITBCBNA #2600601 &075.0015	Tobacco budworm	0.75 lb/A Foliar application. (75% SC/S)

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Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
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Tobacco, Flue Cured (continued)

@INAMBUA #2600601 &075.0015	Tobacco flea beetle 0.5 lb/A (75% SC/S)	Foliar application.
@ITBRAKA #2600601 &075.0015	Tobacco hornworm 0.5 lb/A (75% SC/S)	Foliar application.

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ORNAMENTALS

General Warnings and Limitations: When acephate is used on commercially grown ornamentals, reentry into treated areas is prohibited for 24 hours after the end of application unless protective clothing is worn. Acephate is toxic to birds. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills. Phytotoxicity has occurred on the following foliage plants: Blechnum gibbum, Cissus antartica, Ficus triangularis, Fittonia verschaffetti, prayer plant (Maranta leuconeura kerchoviana), Pachystachya lutea, Plecanthus australis, Polypodium aureum, Polystichum, Pteris ensiformis, and piggyback plant (Tolmiea menziesii). Before treating large plantings, spray only a few plants and observe 14 days for varietal toxicity. Phytotoxicity has also occurred on the following shrubs and trees: American elm, flowering crabapple, sugar maple, red maple, cottonwood, redbud, and weigelia. Use with caution on hibiscus, gloxinia, philodendron, and salvia when repeated applications are required. Granular formulations containing fertilizer preferably should be applied when plants begin to grow in spring. Do not get on wet foliage. Dosages involving granular formulation applied to ornamental woody shrubs and ornamental trees are based on plants under 10 to 12 feet in height. For pressurized liquid formulation, use caution in spraying plants with tender new growth. Avoid wetting foliage with this spray. Hold sprayer lower than foliage and angle spray upward so that the spray particles are driven under the plant leaves. Move sprayer in a fast sweeping motion to provide maximum coverage maintaining a distance of 18 to 24 inches away from the foliage. Do not spray when temperatures exceed 90 F (32.5 C). When using soluble concentrate formulations, apply thoroughly to cover both sides of leaves. Unless otherwise specified, apply when pest first appears and repeat at regular intervals as needed.

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<u>Site and Pest</u>	<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
	<u>Formulation(s)</u>	

(Ornamental Plants (herbaceous, woody shrubs, trees and vines))

General Warnings and Limitations:

Instructions for Injection Treatment:

Implant cartridge (pelleted/tableted formulation) should not be used in trees where the food is to be used for sale or consumption. Do not implant into trees having less than 3 inches of trunk diameter breast height. Do not use on flowering crabapple and chestnut oak as foliage injury may occur. Unless otherwise specified, apply when pest first appears. Applications timed with maximum upward flow of tree sap produce the most successful results. This characteristic may vary with the tree species, time of year, time of day, individual tree vigor, or light intensity at time of treatment. Consult State Cooperative Agricultural Extension Service for more specific timing and use information. If soil moisture conditions are dry, thorough deep watering of the root zone will enhance chemical uptake.

Follow the instructions listed below when using tree implant cartridges:

- 1) Select the proper tools. The tools needed are hammer, flat end punch, bolt, or dowel, tree wound dressing, hand brace or electric drill, and a 1/2 inch drill bit. If using a hand brace, a sharp auger bit will provide the cleanest cut.
- 2) Determine the number of implants to be made. The product should be implanted around the trunk base at 4 inch intervals. Using a tape measure, drill 1/2 inch diameter implant holes at 4 inch spacing, spiralling up and around the trunk base. The implant spiral should be located 6 to 24 inches from the soil line. On low branching trees, place implants beneath the lower branches. Holes should be drilled 1-3/8 inches into the tree trunk from the cambium surface, to ensure the cartridge can be implanted beneath the cambium surface. Cartridges left extending outward into the bark will still provide control, but will delay wound closure.
- 3) Place the cartridges into the predrilled holes, simply pressing them into the tree trunk.
- 4) Using a hammer and a flat end punch, dowel, or bolt, carefully drive the cartridge into the tree, recessing the large end slightly beneath the cambium surface which is below the bark.
- 5) The cartridge head securely plugs the small wound made to the tree trunk, however, it is recommended that a light wound dressing be sprayed or brushed over the implant site. This provides further protection until the cambium callouses over.

When re-treatment is needed, place the new implants in a reverse spiral pattern between and above or below the previous treatment. Do not attempt to drill into and remove the cartridges implanted previously. Do not repeat implant treatments where tree has not shown the ability to adequately callous over the prior treatment.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3401600 <u>Abelia</u>	
@IVABAAA Grasshoppers #3401601	2 tbls or Foliar application. Use in conjunc- 1 fl.oz 9.4% tion with soil application.
&209.4015	SC/L/gal water (9.4% SC/L) or
&215.6015	1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#3401602	2 tbls or Soil application. Apply to soil be- 1 fl.oz 9.4% neath plants. Use in conjunction SC/L/gal with foliar application.
&209.4015	water (9.4% SC/L) or
&215.6015	1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
@IRAAABG Scales (crawlers) #3401601	3 tbls or Foliar application. Apply 2 or 3 1.5 fl.oz times at 7 to 10 day intervals. 9.4% SC/L/ Additional applications may be gal water needed if plants become reinfested.
&209.4015	(9.4% SC/L) or
&215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
/3401700 <u>Acacia</u>	
@IRAXAAA Psyllids #3401701	0.75 tbls or Foliar application.
&075.0015	4.5 g 75% SC/S/gal water (75% SC/S)

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3101300	<u>Ageratum</u>		
•IRACAAA #3101302	Aphids	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
6001.5004			
•ITBCBOA #3101301	Corn earworm	0.75 tbls or or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
6075.0015			
•IMOCAGA #3101301	Flower thrips	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
6075.0015			
6209.4015			
6215.6015			
•IVABAAA #3101301	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3101302			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ageratum</u> (continued)		
@ITBCBNA #3101301	Tobacco budworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015		
@IRABAAA	Whiteflies	Foliar application.
PIMOCAGA		Refer to Flower thrips for use and limitation information.
#3501600	<u>Alder</u>	
@ITBKABA #3501601 #203.0019	Bagworm	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITAUAEA #3501601	Eastern tent caterpillar	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
#075.0015		
#209.4015		

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Alder (continued)

Eastern tent caterpillar (continued)

	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
0ITABAIA 03501601	Fall webworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
0075.0015		
PITBKABA		Refer to Bagworm for additional use and limitation information.
0ITAUAGA	Forest tent caterpillar	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
0IVABAAA 03501601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
03501602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
0ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>	
<u>Alder</u> (continued)			
●IQAXAAA #3501601	Lace bugs	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
6209.4015			
6215.6015			
PITBKABA		Refer to Bagworm for additional use and limitation information.	
●IMAAAGA	Leafminers		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.	
●IQAMARA	Lygus bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.	
●ITAUADA	Tent caterpillars		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.	
●ITAUAFA	Western tent caterpillar		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3141800	<u>Aluminum Plant</u>		
@IRAWAJA #3141801	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015		(15.6% SC/L)	
@IVABAAA #3141801	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3141802			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3101700	<u>Alyssum</u>		
@IMOCAGA #3101701	Flower thrips	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	
&209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015		(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Alyssum</u> (continued)		
#IVABAAA #3101701	Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3101702	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
/3502100	<u>Arborvitae</u>	
#IRACAAA #3502101	Aphids	0.5 tbs or Foliar application. 3 g 75% SC/S/gal water (75% SC/S)
#075.0015	Bagworm	
#ITBKABA #3502101	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)	
#075.0015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Arborvitae (continued)

Bagworm (continued)

&203.0019

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

@ITANABA
#3502101
&203.0019

Cankerworms

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

@ITABAIA

Fall webworm

Foliar application.

PITANABA

Refer to Cankerworms for use and limitation information.

@IVABAAA
#3502101

Grasshoppers

Foliar application.

S3401601

Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

#3502102

Soil application.

S3401602

Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Arborvitae</u> (continued)		
©ITAXAIC Gypsy moth (larvae)		Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.	
©IQAXAAA Lace bugs		Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.	
©IQAMARA Lygus bugs		Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.	
©ILAVAAA #3502101	Spider mites (including spruce spider mite)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
6075.0015	water (75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Additional applications may be needed if plants become reinfested.
6215.6015		
©ITAUADA Tent caterpillars		Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.	
/3402000 <u>Ardisia</u>		
©IRAWAJA #3402001	Citrus mealybug	Foliar application.
S3141801	Refer to Aluminum Plant, Citrus mealybug, Foliar application for use and limitation.	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Ardisia</u> (continued)	
©IVABAAA Grasshoppers #3402001	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3402002	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3502200 <u>Ash</u>	
©IRACAAA Aphids #3502201	0.5 tbs or Foliar application. 3 g 75% SC/S/gal water (75% SC/S)
#075.0015	
#3502223	0.85 g/4 in. Injection treatment. Apply when tree circum- wingless forms first appear. Each ference at implant cartridge contains 0.85 gram breast actual acephate. The number of im- height plant cartridges needed depends on (85% P/T) the diameter breast height of the tree. To determine the number of implant cartridges needed multiply the trunk diameter by 3.14 and di- vide by 4. Refer to general warn- ings under Ornamental Plants (herba- ceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
#085.0005	
©IGAMBBA Ash plant bug #35J2201	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ash (continued)</u>		
@ITBKABA #3502201 &203.0019	Bagworm -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ISBEBEA #3502201 &209.4015 &215.6015	Blackheaded ash sawfly 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@ISBEBFA #3502201 &075.0015	Brownheaded ash sawfly 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@ITANABA PITBKABA	Cankerworms Refer to Bagworm for use and limitation information.	Foliar application.
@ITAUAEA #3502201 &075.0015	Eastern tent caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Ash (continued)

Eastern tent caterpillar (continued)

&209.4015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
&3502223	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005		
@ITABAIA #3502201	Fall webworm	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
PITBKABA		Refer to Bagworm for additional use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ash</u> (continued)		
Fall webworm (continued)		
#3502223	0.85 g/4 in. tree circum- ference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
6085.0005	(85% P/T)	
#ITAUAGA #3502201	Forest tent caterpillar	Foliar application.
6075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6209.4015		
6215.6015		
#IVABAAA #3502201	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3502202		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Ash (continued)</u>	
@ITAXAIA Gypsy moth	Foliar application.
PISBEBEA	Refer to Blackheaded ash sawfly for use and limitation information.
@ITAXAIC Gypsy moth (larvae)	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@ITBRAAA Hornworms	Foliar application.
PISBSBEA	Refer to Blackheaded ash sawfly for use and limitation information.
@IQAXAAA Lace bugs #3502201	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
PITBKABA	Refer to Bagworm for additional use and limitation information.
@IQAHARA Lygus bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@ITAXAAA Tussock moths #3502201	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
@ITAUAFA Western tent caterpillar	Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3102500	<u>Asparagus Fern</u>		
0IRAWAJA #3102501	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6209.4015			
6215.6015			
0IVABAAA #3102501	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3102502			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
0IRAWAMA	Longtailed mealybug		Foliar application.
PIRAWAJA			Refer to Citrus mealybug for use and limitation information.
/3102600	<u>Aster</u>		
0IRACAAA #3102601	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
6075.0015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Aster</u> (continued)		
@ITBKABA #3102601 &203.0019	Bagworm	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITBCCNA #3102601	Beet armyworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water &075.0015 (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water &209.4015 (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water &215.6015 (15.6% SC/L)
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITBCCOA	Fall armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Aster (continued)</u>	
①ITABAIA Fall webworm	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
①IMOCAGA Flower thrips #3102601	0.75 tbs or Foliar application. Apply 2 or 3 4.5 g 75% times at 7 to 10 day intervals. SC/S/gal Additional applications may be need- water ed if plants become reinfested. (75% SC/S)
#075.0015	or
#209.4015	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
	or
#215.6015	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
①IVABAAA Grasshoppers #3102601	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3102602	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
①ITAXAIC Gypsy moth (larvae)	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
①IQAXAAA Lace bugs	Foliar application.
①ITBKABA	Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Aster</u> (continued)		
@IRAFAAA #3102602 &001.5004	Leafhoppers 2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
@IMAAAGA #3102601 &209.4015	Leafminers 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@IQAHARA PITBKABA	Lygus bugs Refer to Bagworm for use and limitation informa- tion.	Foliar application.
@ITBCCLA PITBCCNA	Southern armyworm Refer to Beet armyworm for use and limitation in- formation.	Foliar application.
@ITAUADA PITBKABA	Tent caterpillars Refer to Bagworm for use and limitation informa- tion.	Foliar application.
@ITBCCQA PITBCCNA	Yellowstriped armyworm Refer to Beet armyworm for use and limitation in- formation.	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3402200	<u>Azalea</u>	
@IRACAA #3402201	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)
#075.0015		
@ITBKABA #3402201 #203.0019	Bagworm	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@INASCSA #3402201	Black vine weevil	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)
#075.0015		Foliar application. Use in conjunction with soil application. Apply full coverage spray. Begin application in mid-June and make 3 additional applications at 21 day intervals.
#209.4015		
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Azalea</u> (continued)		
Black vine weevil (continued)		
#3402202	0.75 tbls or 4.5 g 75% SC/S/gal water	Soil application. Apply to soil beneath plants. Use in conjunction with foliar application. Begin application in mid-June and make 3 additional applications at 21 day intervals.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 lf.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITABAIA	Fall webworm	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IVABAAA #3402201	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3402202		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Azalea</u> (continued)	
#IQAXAAA #3402201 Lace bugs	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water
#209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water
#215.6015	(15.6% SC/L)
PITBKABA	Refer to Bagworm for additional use and limitation information.
#3402202	2.5 lb 1.5% Soil application. Apply evenly over G/100 sq.ft the root zone of the plants from the (1.5% G) base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after appli- cation.
#001.5004	
#IQAHARA Lygus bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation informa- tion.

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Azalea (continued)

@IRAWAAA	Mealybugs (including citrus mealybug, longtailed mealybug, and taxus mealybug)	
#3402201	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
@INASDMJ	Obscure root weevil (adults)	
#3402201	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application. Apply full coverage spray in late spring, as soon as feeding damage is noticed (usually about May). Repeat every 28 days through September. Mid-July through August are the peak feeding times.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Azalea (continued)

Obscure root weevil (adults) (continued)

#3402202	2.5 lb 1.5% G/100 sq.ft	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Apply in late spring (May) and repeat at 28 to 42 day intervals through September. Mid-July through August are the peak feeding times.
&001.5004	(1.5% G)	

©IRAAABG
#3402201

Scales (crawlers) (including indian wax scale and tea scale)

	1 tbls or 6 g 75% SC/S/ gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S)	
	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L)	
	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

©ILAVAAA
#3402201

Spider mites (including southern red mite)

	1 tbls or 6 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S)	
	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Azalea</u> (continued)	
@ITAUADA Tent caterpillars	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IRABAAA Whiteflies	Foliar application.
PIRAWAAA	Refer to Mealybugs (including citrus mealybug, longtailed mealybug, and taxus mealybug) for use and limitation information.
/3502500 <u>Baldcypress</u>	
@ITBKABA Bagworm	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water
#3502501	(9.4% SC/L)
&209.4015	or 3 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015	
@IVABAAA Grasshoppers	Foliar application.
#3502501	
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3502502	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Baldcypress</u> (continued)		
●IRAAABG #3502501	Scales (crawlers)	
6209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 to 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6215.6015		
●ILAVAMA #3502501	Southern red mite	
6215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
●ILAVAPA	Spruce spider mite	
		Foliar application.
PILAVAMA		Refer to Southern red mite for use and limitation information.
●ILAVBEA	Twospotted spider mite	
		Foliar application.
PILAVAMA		Refer to Southern red mite for use and limitation information.
/3402500	<u>Barberry</u>	
●IVABAAA #3402501	Grasshoppers	
S3401601		Foliar application.
63402502		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
S3401602		Soil application.
		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Barberry</u> (. tinued)		
@IRABAAA #3402501 &209.4015	Whitefli. 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&215.6015		
/3502700	<u>Beech</u>	
@IRACAAA #3502701 &075.0015	Aphids 0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@ITBKABA #3502701 &203.0019	Bagworm -- (3% FrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAHBBA #3502701 &075.0015	Black scale 1 tbls or 6 g 75% SC/S/ gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
@ITANABA	Cankerworms	
PITBKABA		Foliar application.
	Refer to Bagworm for use and limitation information.	

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Beech (continued)

●IRARACA	Cottonycushion scale	Foliar application.
PIRAHBBA		Refer to Black scale for use and limitation information.
●ITANACA #3502701	Fall cankerworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015		
●ITABAIA	Fall webworm	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
●ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
●IRAHBAA	Hemispherical scale	Foliar application.
PIRAHBPA		Refer to Black scale for use and limitation information.
●IQAXAAA	Lace bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
●IQAMARA	Lygus bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Beech</u> (continued)		
#ITBDAFA #3502701 #075.0015	Saddled prominent 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITANAVA #3502701 #075.0015	Spring cankerworm 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITAUAADA PITBKABA	Tent caterpillars Refer to Bagworm for use and limitation information.	Foliar application.
#ITAXAAA #3502701 #075.0015	Tussock moths 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITBDABA #3502701 #075.0015	Walnut caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITBDADA #3502701 #075.0015	Yellownecked caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
/3103400	<u>Begonia</u>	
#IVABAAA #3103401 S3401601	Grasshoppers Refer to Abelia, Grasshoppers, for use and limitation information.	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Begonia (continued)

Grasshoppers (continued)

#3103402		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAWAAA #3103401	Mealybugs (including citrus mealybug and longtailed mealybug)	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015	(15.6% SC/L)	
@ITBUAVA #3103401	Obliquebanded leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Begonia</u> (continued)		
@ITBUBCA #3103401	Omnivorous leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
/3502800	<u>Birch</u>	
@IRACAAA #3502801	Aphids	
	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
	or 2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L)	
&209.4015		
	or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
#3502802	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.
&001.5004		
#3502823	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Apply when wingless forms first appear. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and di-
&085.0005		

Use pattern continued on the next page.

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Site and Pest

Dosages and Tolerance, Use, Limitations
Formulation(s)

Birch (continued)

Aphids (continued)

vide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

●ITBKABA
#3502801
#203.0019

Bagworm

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

●ISBEAMA
#3502823

Birch leafminer

0.85 g/4 in.
tree circum-
ference at
breast
height
(85% P/T)

Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

#085.0005

●ITANABA

Cankerworms

Foliar application.

PITBKABA ;

Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Birch</u> (continued)		
#ISBEAHA #3502801 Dusky birch sawfly	0.75 tbs or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or	
	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or	
	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
#3502802	2.5 lb 1.5% G/100 sq.ft	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.
&001.5004	(1.5% G)	
#ITAUAEA #3502801 Eastern tent caterpillar	0.75 tbs or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or	
	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or	
	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Birch (continued)

Eastern tent caterpillar (continued)

#3502823	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005	(85% P/T)	

#ITANACA #3502801	Fall cankerworm	0.75 tbs or 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)

#ITABAIA #3502801	Fall webworm	0.75 tbs or 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)

		or 3 tbs or 1.5 fl.oz 9.4% SC/L/gal water
&209.4015		(9.4% SC/L)

		or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/gal water
&215.6015		(15.6% SC/L)

PITBKABA		Refer to Bagworm for additional use and limitation information.
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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Birch (continued)

Fall webworm (continued)

#3502823	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005	(85% P/T)	

@ITAUAGA
#3502801

Forest tent caterpillar

	0.75 tbs or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/gal water	
&209.4015	(9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015	(15.6% SC/L)	

@IVABAAA
#3502801

Grasshoppers

		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3502802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Birch</u> (continued)		
0ITAXAIA	Gypsy moth	Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and limitation information.	
0ITAXAIC #3502801 #203.0019	Gypsy moth (larvae)	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
#3502823	0.85 g/4 in. tree circumference at breast	Injection treatment. Apply 4 days prior to or during early larval feeding stage. Each implant cartridge contains 0.85 gram actual height acephate. The number of
implant #085.0005	(85% P/T)	cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
0IQAXAAA #3502801	Lace bugs	Foliar application.
#209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or	
#215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Birch</u> (continued)		
Lace bugs (continued)		
PITBKABA	Refer to Bagworm for additional use and limitation information.	
@IHAAAGA #3502801	Leafminers	
&075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
&209.4015		
&215.6015		
#3502802	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. For control of birch leafminers apply in the early spring when leaves are unfolding (leaf puncture stage) or at the earliest sign of leaf damage. Repeat applications in 28 to 42 days for second generation.
&001.5004		
@IQAMARA	Lygus bugs	
		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Birch</u> (continued)		
●ITBDAIA #3502801	Redhumped caterpillar	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015		
●ITANAVA #3502801	Spring cankerworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015		
●ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
●ITAXAAA	Tussock moths (including whitemarked tussock moth)	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
●ITBDAGA #3502801	Variable oakleaf caterpillar	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015		
●ITAUAFA	Western tent caterpillar	Foliar application.
PITAUAGA		Refer to Forest tent caterpillar for use and limitation information.
●ITSBADA	Yellownecked caterpillar	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3103800	<u>Bird-of-Paradise</u>		
QIRAWAJA #3103801	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
G209.4015			
G215.6015			
QIVABAAA #3103801	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3103802			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
QIRAWAMA	Longtailed mealybug		Foliar application.
PIRAWAJA			Refer to Citrus mealybug for use and limitation information.
/3536600	<u>Bischofia</u>		
QIVABAAA #3536601	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3536602			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Bischofia</u> (continued)		
#IRAAABG #3536601 &209.4015 &215.6015 /3502900	Scales (crawlers) 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
<u>Black Cherry</u>		
#ITAUAEA #3502901 &075.0015	Eastern tent caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITAUAGA #3502901 &075.0015	Forest tent caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#ITAUAFA #3502901 &075.0015	Western tent caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3503200 <u>Blackqu</u>	
©ITBKABA #3503201 #203.0019	Bagworm -- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©ITANABA	Cankervorms
PITBKABA	Foliar application.
©ITAUAEA #3503201	Refer to Bagworm for use and limitation information.
	Eastern tent caterpillar
#075.0015	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
©ITABAIA	Fall webworm
PITBKABA	Foliar application.
©ITAUAGA #3503201	Refer to Bagworm for use and limitation information.
	Forest tent caterpillar
#075.0015	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
©ITAXAIA #3503201	Gypsy moth
#075.0015	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Blackgum</u> (continued)		
©ITAXAIC Gypsy moth (larvae)		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
©IQAXAAA Lace bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
©IQAMARA Lygus bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
©ITAUADA Tent caterpillars		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
©ITAUFA #3503201	Western tent caterpillar	
	0.75 tbs or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
#075.0015	(75% SC/S)	
/3402900	<u>Boston Ivy</u>	
©IRAFAOA #3402901	Grape leafhopper	
	3 tbs or	Foliar application.
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
#209.4015	(9.4% SC/L)	
	or	
	1.5 tbs or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
#215.6015	(15.6% SC/L)	

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Site and Pest

Dosages and Tolerance, Use, Limitations
Formulation(s)

Boston Ivy (continued)

#IVABAAA #3402901	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3402902		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#INBPAZA #3402901	Japanese beetle	4 tbs or Foliar application. Repeat at 7 to 2 fl.oz 9.4% 10 day intervals as needed.
6209.4015		SC/L/gal water (9.4% SC/L) or 2 tbs or 1 fl.oz 15.6% SC/L/gal water (15.6% SC/L)
6215.6015		
#IRAFAJA	Potato leafhopper	Foliar application.
PIRAFAOA		Refer to Grape leafhopper for use and limitation information.
/3426200	<u>Bottlebrush</u>	
#IRAHBBG #3426201	Black scale (crawlers)	1 tbs or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6075.0015		
#IRARACG #3426201	Cottonycushion scale (crawlers)	1 tbs or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Bottlebrush</u> (continued)		
●IRANBAG #3426201	Hemispherical scale (crawlers)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
6075.0015	water (75% SC/S)	Additional applications may be needed if plants become reinfested.
●ILAVAAA #3426201	Spider mites (including southern red mite)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
6075.0015	water (75% SC/S)	Additional applications may be needed if plants become reinfested.
	or	
	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
●IRAKAZG #3426201	Tea scale (crawlers)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
6075.0015	water (75% SC/S)	Additional applications may be needed if plants become reinfested.
/3403000	<u>Bougainvillea</u>	
●IVABAAA #3403001	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3403002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Bougainvillea</u> (continued)		
@IRAAABG #3403001 &209.4015	Scales (crawlers)	
	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
&215.6015		
/3503400	<u>Boxelder</u>	
@ITBKABA #3503401 &075.0015	Bagworm	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITABAIA #3503401 &075.0015	Fall webworm	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBUAVA #3503401 &075.0015	Obliquebanded leafroller	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBUBCA #3503401 &075.0015	Omnivorous leafroller	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Boxelder (continued)</u>	
©ITAXAAA #3503401 &075.0015 /3403100	Tussock moths 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
/3403100 ©IRACAAA #3403101 &075.0015	<u>Boxwood</u> Aphids 0.5 tbls or Foliar application. 3 g 75% SC/S/gal water (75% SC/S)
©ITBKABA #3403101 &203.0019	Bagworm -- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©ITANABA	Cankerworms Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
©ITABAIA	Fall webworm Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
©IVABAAA #3403101	Grasshoppers Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Boxwood (continued)

Grasshoppers (continued)

#3403102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
•ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
•IQAXAAA	Lace bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
•IQAMARA	Lygus bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
•IRAAABG	Scales (crawlers) (including cottoncushion scale and indian wax scale)	
#3403101		1 tbs or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
&075.0015		gal water Additional applications may be needed if plants become reinfested.
		(75% SC/S)
		or
		3 tbs or
		1.5 fl.oz
		9.4% SC/L/
		gal water
&209.4015		(9.4% SC/L)
		or
		1.5 tbs or
		0.75 fl.oz
		15.6% SC/L/
		gal water
&215.6015		(15.6% SC/L)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Boxwood</u> (continued)		
①ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
/3105000	<u>Calendula</u>	
①IRACAAA	Aphids	
②3105001		0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
②075.0015		
②209.4015		
②215.6015		
①ITBCCNA	Beet armyworm	
②3105001		0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
②075.0015		
②209.4015		
②215.6015		

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Site and Pest	Dosages and Tolerance, Use, Limitations Formulation(s)
<u>Calendula</u> (continued)	
@ITBCBOA Corn earworm	Foliar application.
PITBCCNA	Refer to Beet armyworm for use and limitation information.
@ITBCCOA Fall armyworm	Foliar application.
PITBCCNA	Refer to Beet armyworm for use and limitation information.
@IMOCAGA Flower thrips #3105001	0.75 tbls or Foliar application. Apply 2 or 3 4.5 g 75% times at 7 to 10 day intervals. SC/S/gal Additional applications may be need- water ed if plants become reinfested.
&075.0015	(75% SC/S)
	or
	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water
&209.4015	(9.4% SC/L)
	or
	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water
&215.6015	(15.6% SC/L)
@IVABAAA Grasshoppers #3105001	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3105002	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAFAJA Potato leafhopper #3105001	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015	(75% SC/S)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Calendula</u> (continued)		
●ITBCCWA #3105001	Rose budworm	
	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
6209.4015		
●ITBCCLA	Southern armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation in- formation.
●ITBCBNA #3105001	Tobacco budworm	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
6075.0015		
●ITBCCQA	Yellowstriped armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation in- formation.
/3403600	<u>Camellia</u>	
●IVABAAA #3403601	Grasshoppers	
		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3403602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Camellia (continued)

●IRAWAAA #3403601	Mealybugs (including citrus mealybug) 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		
&209.4015		
●IRAAABG	Scales (crawlers) (including black scale, cottoncushion scale, hemispherical scale, indian wax scale, and tea scale) Foliar application.	
PIRAWAAA	Refer to Mealybugs (including citrus mealybug) for use and limitation information.	
●ILAVAAA #3403601	Spider mites (including southern red mite) 1 tbls or 6 g 75% SC/S/ gal water (75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		
&215.6015		
●IRABAAA	Whiteflies Foliar application.	
PIRAWAAA	Refer to Mealybugs (including citrus mealybug) for use and limitation information.	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3435700	<u>Carissa</u>		
©IVABAAA #3435701	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3435702			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
©IRAAABG #3435701	Scales (crawlers)	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#209.4015			
#215.6015			
/3105700	<u>Carnation</u>		Some soluble concentrate/solid formulations claim that application should not be made more than once every 28 days.
©IRACAAA #3105701	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
#075.0015			
#209.4015			

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Carnation (continued)</u>		
Aphids (continued)		
	or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@ITBCCNA #3105701	Beet armyworm	
	3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015		
	or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@ITBCCOA	Fall armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation in- formation.
@INOCAGA #3105701	Flower thrips	
	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
&075.0015		
	or 3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015		
	or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Carnation</u> (continued)		
@IVABAAA #3105701	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3105702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITBUAVA #3105701	Obliquebanded leafroller	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&075.0015		
&209.4015		
@ITBUBCA #3105701	Omnivorous leafroller	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITBCCLA #3105701	Southern armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@ITBCCQA #3105701	Yellowstriped armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3503600	<u>Catalpa</u>	
•ITBRAEA #3503601	Catalpa sphinx	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&209.4015		or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015		
•IVABAAA #3503601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3503602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3503700	<u>Cedar</u>	
•ITBKABA #3503701	Bagworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&209.4015		

Use pattern continued on the next page.

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Site and Pest

Dosages and Formulation(s) Tolerance, Use, Limitations

Cedar (continued)

Bagworm (continued)

	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
&203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

@ITANABA
#3503701
#203.0019

Cankerworms

-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
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@IVABAAA
#3503701

Grasshoppers

S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3503702	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Cedar (continued)</u>	
●ITAXAIA #3503701 Gypsy moth	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015	(75% SC/S) or
&209.4015	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&215.6015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
●ITAXAIC Gypsy moth (larvae)	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation in- formation.
●IQAXAAA Lace bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation in- formation.
●IQAMARA Lygus bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation in- formation.
●ITAUADA Tent caterpillars	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation in- formation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3105800 <u>Celosia</u> @IMOCAGA Flower thrips #3105801	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#075.0015		
/3404000 <u>Cherry Laurel</u>		
@ITBGCMA Cherry-laurel leaf-tier #3404001	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		
#3404002	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Do not apply more than 3 times per year.
#001.5004		
@IVABAAA Grasshoppers #3404001		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3404002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cherry Laurel</u> (continued)		
#ITBGCJA #3404001	Maple shoot moth complex	
	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#215.6015		
#ITBUAWA #3404001	Omnivorous leaftier	
	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#209.4015		
#215.6015		
/3504000	<u>Chinese Elm</u>	
#ITBCCNA #3504001	Beet armyworm	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#075.0015		
#209.4015		
#215.6015		
#INAMDAA #3504001	Elm leaf beetle	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Chinese Elm</u> (continued)		
@INAMDAC #3504001 6209.4015 6215.6015	Elm leaf beetle (larvae) 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@ITBCCOA	Fall armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@IVABAAA #3504001 S3401601	Grasshoppers	Foliar application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3504002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITBEAFA #3504001 6075.0015	Mourningcloak butterfly 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Chinese Elm</u> (continued)		
@IRAAABG #3504001	Scales (crawlers) (including indian wax scale)	
	1 tbls or 6 g	Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
#075.0015	water	Additional applications may be needed if plants become reinfested.
	(75% SC/S)	
#209.4015	or	
	3 tbls or	
#215.6015	1.5 fl.oz	
	9.4% SC/L/	
#215.6015	gal water	
	(9.4% SC/L)	
#215.6015	or	
	1.5 tbls or	
#215.6015	0.75 fl.oz	
	15.6% SC/L/	
#215.6015	gal water	
	(15.6% SC/L)	
@ITBCCLA PITBCCNA	Southern armyworm	Foliar application.
		Refer to Beet armyworm for use and limitation information.
@ITAXAAA PITBCCNA	Tussock moths (including whitemarked tussock moth)	Foliar application.
		Refer to Beet armyworm for use and limitation information.
@ITBCCQA PITBCCNA	Yellowstriped armyworm	Foliar application.
		Refer to Beet armyworm for use and limitation information.
/3416100 #IVABAAA #3416101	<u>Chinese Holly</u> Grasshoppers	Foliar application.
		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3401601 #3416102		Soil application.
		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Chinese Holly (continued)

0IRAAABG	Scales (crawlers) (including black scale, cottoncushion scale, hemispherical scale, indian wax scale, and tea scale)	
03416101	1 tble or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
0075.0015	(75% SC/S)	ed if plants become reinfested.
	or	
	3 tble or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
0209.4015	(9.4% SC/L)	
	or	
	1.5 tble or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
0215.6015	(15.6% SC/L)	

/3532900 Choke Cherry

0ITAUAEA	Eastern tent caterpillar	
03532901	0.75 tble or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
0075.0015	(75% SC/S)	
	or	
	3 tble or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
0209.4015	(9.4% SC/L)	
	or	
	1.5 tble or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
0215.6015	(15.6% SC/L)	

0ITAUAGA	Forest tent caterpillar	Foliar application.
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PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.
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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Choke Cherry</u> (continued)		
@ITAUFA	Western tent caterpillar	Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	
/3106500	<u>Chrysanthemum</u>	Some soluble concentrate/solid formulation labels claim that application should not be made more often than once every 28 days. Phytotoxicity has occurred on the following varieties: albatross, bonnie jean, dixie, garland gem, iceberg, pride, showoff, statesman, tally ho, westward ho, and wild honey. Before treating large chrysanthemum plantings, spray only a few plants and observe 14 days for varietal phytotoxicity.
#IRACAAA #3106501	Aphids	0.5 tbls or 3 g 75% SC/S/gal water
&075.0015		(75% SC/S) or
&209.4015		3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&215.6015		or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#3106502		2.5 lb 1.5% G/100 sq.ft (1.5% G)
&001.5004		Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.

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Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
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Chrysanthemum (continued)

@ITBCCNA #3106501 #209.4015	Beet armyworm	3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
		or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015			
@ITBCCSA #3106501 #075.0015	Cabbage looper	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@ITBCCOA PITBCCNA	Fall armyworm		Foliar application.
		Refer to Beet armyworm for use and limitation information.	
@IMOCAGA #3106501 #075.0015	Flower thrips	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
		or 3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015		or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Chrysanthemum</u> (continued)		
@IVABAAA #3106501 S3401601 #3106502 S3401602	Grasshoppers Mealybugs (including citrus mealybug)	Foliar application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Abelia, Grasshoppers, Soil application for use and limitation information. 0.75 tbls or Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. 4.5 g 75% SC/S/gal Additional applications may be needed if plants become reinfested. water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#3106501 &075.0015 &209.4015 &215.6015	Mealybugs (including citrus mealybug) Obliquebanded leafroller	Additional applications may be needed if plants become reinfested. Foliar application.
@ITBUAVA #3106501 &209.4015 &215.6015	Obliquebanded leafroller Obliquebanded leafroller	Foliar application. 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Chrysanthemum (continued)

@ITANAWA #3106501 &075.0015	Omnivorous looper 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@IRAAABG #3106501 &075.0015	Scales (crawlers) (including black scale, cottony cushion scale, and hemispherical scale) 1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&215.6015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
@ITBCCLA PITBCCNA	Southern armyworm Refer to Beat armyworm for use and limitation information.	Foliar application.
@IRAEAAA #3106501 &075.0015	Spittlebugs 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	

Use pattern continued on the next page.

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Site and Pest

Dosages and Tolerance, Use, Limitations Formulation(s)

Chrysanthemum (continued)

Spittlebugs (continued)

or
1.5 tbsl or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

&215.6015

@ILAVBEA
#3106501

Twospotted spider mite

1 tbsl or 6 g Foliar application. Apply 2 or 3
75% SC/S/gal times at 7 to 10 day intervals.
water Additional applications may be need-
(75% SC/S) ed if plants become reinfested.

&075.0015

or
1.5 tbsl or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

&215.6015

@ITBCCQA

Yellowstriped armyworm

Foliar application.

PITBCCNA

Refer to Beet armyworm for use and limitation in-
formation.

/3509500

Citrus (Ornamental)

@IRABABA
#3509523

Citrus blackfly

0.85 g/4 in. Injection treatment. Each implant
tree circum- cartridge contains 0.85 gram actual
ference at acephate. The number of implant
breast cartridges needed depends on the
height diameter breast height of the tree.
(85% P/T) To determine the number of implant
cartridges needed, multiply the
trunk diameter by 3.14 and divide by
4. Refer to general warnings under
Ornamental Plants (herbaceous, woody
shrubs, trees and vines) for specif-
ic information and instructions on
implant cartridge application.

&085.0005

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3435600 <u>Cockspur Thorn</u>	
●ITANACA Fall cankerworm #3435601	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
6075.0015	(75% SC/S) or
	3 tbs or 1.5 fl.oz
	9.4% SC/L/ gal water
6209.4015	(9.4% SC/L) or
	1.5 tbs or 0.75 fl.oz
	15.6% SC/L/ gal water
6215.6015	(15.6% SC/L)
●IVABAAA Grasshoppers #3435601	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3435602	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
●ITANAVA Spring cankerworm #3435601	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
6075.0015	(75% SC/S)
/3107100 <u>Coleus</u>	
●IVABAAA Grasshoppers #3107101	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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Site and Pest

Dosages and Formulation(s) Tolerance, Use, Limitations

Coleus (continued)

Grasshoppers (continued)

#3107102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#IRAWAAA	Mealybugs (including citrus mealybug, longtailed mealybug, and solanum mealybug)	
#3107101		0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)
&075.0015		Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015		
&215.6015		
/3107200	<u>Columbine</u>	
#IHAAAGA	Leafminers	
#3107201		0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		Foliar application.
/3404500	<u>Cotoneaster</u>	
#IVABAAA	Grasshoppers	
#3404501		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3404502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Cotoneaster (continued)

@IQAXAAA #3404501 &209.4015 &215.6015	Lace bugs	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@IRAAABG #3404501 &209.4015 &215.6015	Scales (crawlers)	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
73404600	<u>Grape Myrtle</u>		
@IRACAAA #3404602 &001.5004	Aphids	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over root zone of the plants from the base to the drip line on all sides of plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after appli- cation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Grape Myrtle (continued)</u>		
@ITBCCNA #3404601	Beet armyworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
6075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water
6209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water
6215.6015		(15.6% SC/L)
@ITBCCOA	Fall armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@IVABAAA #3404601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3404602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITBCCLA	Southern armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@ITBCCQA	Yellowstriped armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3404700 <u>Crotons</u>	
@IVABAAA #3404701 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3404702	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAWAAA #3404701	Mealybugs (including citrus mealybug and longtailed mealybug) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested. or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#075.0015	
#209.4015	
#215.6015	
@IRAAABG #3404701	Scales (crawlers) (including black scale, cottoncushion scale, and hemispherical scale) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested. or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#075.0015	
#209.4015	
#215.6015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Crotons</u> (continued)		
#ILAVBEA #3404701	Twospotted spider mite	
	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#215.6015		
/3410700	<u>Cuban Laurel</u>	
#IMOBAAE #3410701	Cuban laurel thrips	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#075.0015		
#209.4015		
#215.6015		
#3410702	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.
#001.5004		
#IVABAAA #3410701	Grasshoppers	
		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3410702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3504200 <u>Cypress</u>		
@ITBKABA #3504201 Bagworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)	
#075.0015		
#203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAHBBG #3504201 Black scale (crawlers)	1 tbs or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water (75% SC/S) Additional applications may be needed if plants become reinfested.	
#075.0015		
@ITANABA #3504201 Cankerworms #203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRARACG Cottonycushion scale (crawlers)		Foliar application.
PIRAHBBG	Refer to Black scale (crawlers) for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations Formulation(s)</u>
<u>Cypress (continued)</u>	
0ITBWAIA #3504201 Cypress tip moth	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
0ITAXAIC Gypsy moth (larvae)	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
0IRAHBAG Hemispherical scale (crawlers)	Foliar application.
PIRAHBBC	Refer to Black scale (crawlers) for use and limitation information.
0IQAXAAA Lace bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
0IQAHARA Lygus bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
0ILAVAAA #3504201 Spider mites	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/ times at 7 to 10 day intervals. gal water Additional applications may be need- (75% SC/S) ed if plants become reinfested.
6075.0015	
0ITAUADA Tent caterpillars	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.

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Site and Pest	Dosages and Tolerance, Use, Limitations Formulation(s)
/3108400 <u>Dahlias</u>	
@ITBCCNA #3108401 Beet armyworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S) or
#209.4015	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
#215.6015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
@ITBCCOA Fall armyworm	Foliar application.
PITBCCNA	Refer to Beet armyworm for use and limitation information.
@IRAFAOA #3108401 Grape leafhopper	3 tbs or Foliar application. 1.5 fl.oz 9.4% SC/L/ gal water
#209.4015	(9.4% SC/L) or
#215.6015	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
@IVABAAA #3108401 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3108402	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and</u>	<u>Tolerance, Use, Limitations</u>
		<u>Formulation(s)</u>	
<u>Dahlias</u> (continued)			
@IRAFAAA #3108402 &001.5004	Leafhoppers	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly. Do not apply more than 3 times per year.
@ITAAAOA #3108402 &001.5004	Loopers	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly. Do not apply more than 3 times per year.
@IRAJAJA PITBCCNA @ITBCCLA	Potato leafhopper		Foliar application. Refer to Beet armyworm for use and limitation in- formation.
PITBCCNA @ILAVBEA #3108401	Southern armyworm		Foliar application. Refer to Beet armyworm for use and limitation in- formation.
@ILAVBEA #3108401 &075.0015	Twospotted spider mite	1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
&215.6015 @ITBCCQA PITBCCNA	Yellowstriped armyworm		Foliar application. Refer to Beet armyworm for use and limitation in- formation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3108500 #IMOCAGA #3108501 Flower thrips	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
6075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
6209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015 #IVABAAA #3108501 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3108502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#IOAMARA #3108501 Lygus bugs	0.5 lb/100 gal water (75% SC/S)	Foliar application.
6075.0015		
#IMOAAAA #3108501 Thrips	0.5 lb/100 gal water (75% SC/S)	Foliar application. Apply when pest first appears or at the tight flower bud stage.
6075.0015		
/3108600 <u>Daylilies</u>		
#IMOCAGA #3108601 Flower thrips	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Ad- ditional applications may be needed if plants become reinfested.
6075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Daylilies</u> (continued)		
●ILAVBEA Twospotted spider mite		Foliar application.
PIMOCAGA		Refer to Flower thrips for use and limitation information.
/3108700 <u>Dianthus</u>		
●IMOCAGA Flower thrips		
#3108701	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6075.0015		
/3108900 <u>Dieffenbachia</u>		
●IVABAAA Grasshoppers		
#3108901		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3108902		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
●IRAWAAA Mealybugs (including citrus mealybug)		
#3108901	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L)	
6209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	
6215.6015		

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Site and Pest	Dosages and Tolerance, Use, Limitations Formulation(s)
/3504300 <u>Dogwood</u>	
@IRAKAZG #3504301 Tea scale (crawlers)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested.
#075.0015	
/3504400 <u>Douglas-Fir</u>	
@ITBUATA #3504423 Western spruce budworm	0.85 g/4 in. Injection treatment. Apply during tree circum- bud swelling prior to bud burst. ference at Each implant cartridge contains 0.85 breast gram actual acephate. The number of height implant cartridges needed depends on (85% P/T) the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and di- vide by 4. Refer to general warn- ings under Ornamental Plants (herba- ceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
#085.0005	
/3109200 <u>Dracaena</u>	
@IVABAAA #3109201 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3109202	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAWAAA #3109201 Mealybugs (including citrus mealybug and longtailed mealybug)	3 tble or Foliar application. Apply 2 or 3 1.5 fl.oz times at 7 to 10 day intervals. 9.4% SC/L/ Additional applications may be need- gal water ed if plants become reinfested. (9.4% SC/L)
#209.4015	

Use pattern continued on the next page.

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ACEPHATE

Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
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Dracaena (continued)

Mealybugs (including citrus mealybug and longtailed mealybug)
(continued)

		or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015		
/3523800	<u>Eastern Redbud</u>	
0ITABAIA #3523801	Fall webworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015		
/3504900	<u>Elm</u>	
0IRACAAA #3504923	Aphids	0.85 g/4 in. Injection treatment. Apply when tree circum- wingless forms first appear. Each ference at implant cartridge contains 0.85 gram breast actual acephate. The number of im- height plant cartridges needed depends on (85% P/T) the diameter breast height of the trees. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and di- vide by 4. Refer to general warn- ings under Ornamental Plants (herba- ceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
6085.0005		
0INANDAC #3504923	Elm leaf beetle (larvae)	C.85 g/4 in. Injection treatment. Apply after tree circum- eggs are present or during early ference at larval feeding stage. Each implant breast cartridge contains 0.85 gram actual height acephate. The number of implant (85% P/T) cartridges needed depends on the di- ameter breast height of the trees.
6085.0005		

Use pattern continued on the next page.

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Elm (continued)

Elm leaf beetle (larvae) (continued)

To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

©INAMAAC
#3504902

Leaf beetles (larvae)

2.5 lb 1.5%
G/100 sq.ft
(1.5% G)

&001.5004

Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.

/3405300

Euonymus

©IRACAAA
#3405301

Aphids

0.5 tbs or
3 g 75%
SC/S/gal
water
(75% SC/S)

Foliar application.

&075.0015

©INASCSA
#3405301

Black vine weevil

3 tbs or
1.5 fl.oz
9.4% SC/L/
gal water
(9.4% SC/L)
or
1.5 tbs or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

Foliar application. Use in conjunction with soil application. Begin application in mid-June and make 3 additional applications at 21 day intervals.

&209.4015

&215.6015

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Euonymus (continued)

Black vine weevil (continued)

#3405302	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	Soil application. Apply to soil beneath plants. Use in conjunction with foliar application. Begin application in mid-June and make 3 additional applications at 21 day intervals.
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		

#IVABAAA #3405301	Grasshoppers	
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Foliar application.

S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
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#3405302		Soil application.
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S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
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#ITBGCJA #3405301	Maple shoot moth complex	
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	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
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&215.6015

#ITBUAWA #3405301	Omnivorous leaftier	
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Foliar application.

&209.4015

&215.6015

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Euonymus (continued)

©IRAAABG	Scales (crawlers) (including black scale, indian wax scale, and tea scale)	
#3405301		1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
&075.0015		water Additional applications may be needed if plants become reinfested.
		(75% SC/S)
		or
		3 tbls or
		1.5 fl.oz
		9.4% SC/L/
		gal water
&209.4015		(9.4% SC/L)
		or
		1.5 tbls or
		0.75 fl.oz
		15.6% SC/L/
		gal water
&215.6015		(15.6% SC/L)
/3437000	<u>Euryops</u>	
©IRAEAAA	Spittlebugs	
#3437001		0.75 tbls or Foliar application.
		4.5 g 75%
		SC/S/gal
		water
&075.0015		(75% SC/S)
/3448100	<u>False Aralia</u>	
©IVABAAA	Grasshoppers	
#3448101		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3448102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>False Aralia</u> (continued)		
#IRAWAAA #3448101	Mealybugs (including citrus mealybug and longtailed mealybug)	
	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		
/3505100	<u>Fir</u>	
#IRACAAA #3505101	Aphids	
	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		
#IVABAAA #3505101	Grasshoppers	
		Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3505102	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Fir</u> (continued)		
©IRAAABG #3505101	Scales (crawlers) (including cottonycushion scale, hemlock scale, and pine needle scale) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.	
&075.0015	water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Additional applications may be needed if plants become reinfested.
&209.4015		
&215.6015		
©ILAVAAA #3505101	Spider mites (including spruce spider mite) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.	
&075.0015	water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Additional applications may be needed if plants become reinfested.
&209.4015		
&215.6015		
©ITAXAAA #3505101	Tussock moths 0.75 tbls or 4.5 g 75% SC/S/gal	
&075.0015	water (75% SC/S)	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3405800	<u>Firethorn</u>	
©IRACAAA #3405801	Aphids	0.5 tbls or Foliar application. 3 g 75% SC/S/gal
6075.0015		water (75% SC/S) or
6209.4015		3 tbls or 1.5 fl.oz 9.4% SC/L/ (9.4% SC/L) or
6215.6015		1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
©ITBKABA #3405801 6203.0019	Bagworm	-- (3% PrL)
Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.		
©ITANABA	Cankerworms	
PITBKABA		Foliar application.
©IVABAAA #3405801	Grasshoppers	Refer to Bagworm for use and limitation information.
S3401601		Foliar application.
#3405802		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
S3401602		Soil application.
		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

ACEPHATE

<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
1. 100 mg PO q 6h 2. 100 mg PO q 8h 3. 100 mg PO q 12h 4. 100 mg PO q 18h 5. 100 mg PO q 24h 6. 100 mg PO q 30h 7. 100 mg PO q 36h 8. 100 mg PO q 42h 9. 100 mg PO q 48h 10. 100 mg PO q 54h 11. 100 mg PO q 60h 12. 100 mg PO q 66h 13. 100 mg PO q 72h 14. 100 mg PO q 78h 15. 100 mg PO q 84h 16. 100 mg PO q 90h 17. 100 mg PO q 96h 18. 100 mg PO q 102h 19. 100 mg PO q 108h 20. 100 mg PO q 114h 21. 100 mg PO q 120h 22. 100 mg PO q 126h 23. 100 mg PO q 132h 24. 100 mg PO q 138h 25. 100 mg PO q 144h 26. 100 mg PO q 150h 27. 100 mg PO q 156h 28. 100 mg PO q 162h 29. 100 mg PO q 168h 30. 100 mg PO q 174h 31. 100 mg PO q 180h 32. 100 mg PO q 186h 33. 100 mg PO q 192h 34. 100 mg PO q 198h 35. 100 mg PO q 204h 36. 100 mg PO q 210h 37. 100 mg PO q 216h 38. 100 mg PO q 222h 39. 100 mg PO q 228h 40. 100 mg PO q 234h 41. 100 mg PO q 240h 42. 100 mg PO q 246h 43. 100 mg PO q 252h 44. 100 mg PO q 258h 45. 100 mg PO q 264h 46. 100 mg PO q 270h 47. 100 mg PO q 276h 48. 100 mg PO q 282h 49. 100 mg PO q 288h 50. 100 mg PO q 294h 51. 100 mg PO q 300h 52. 100 mg PO q 306h 53. 100 mg PO q 312h 54. 100 mg PO q 318h 55. 100 mg PO q 324h 56. 100 mg PO q 330h 57. 100 mg PO q 336h 58. 100 mg PO q 342h 59. 100 mg PO q 348h 60. 100 mg PO q 354h 61. 100 mg PO q 360h 62. 100 mg PO q 366h 63. 100 mg PO q 372h 64. 100 mg PO q 378h 65. 100 mg PO q 384h 66. 100 mg PO q 390h 67. 100 mg PO q 396h 68. 100 mg PO q 402h 69. 100 mg PO q 408h 70. 100 mg PO q 414h 71. 100 mg PO q 420h 72. 100 mg PO q 426h 73. 100 mg PO q 432h 74. 100 mg PO q 438h 75. 100 mg PO q 444h 76. 100 mg PO q 450h 77. 100 mg PO q 456h 78. 100 mg PO q 462h 79. 100 mg PO q 468h 80. 100 mg PO q 474h 81. 100 mg PO q 480h 82. 100 mg PO q 486h 83. 100 mg PO q 492h 84. 100 mg PO q 498h 85. 100 mg PO q 504h 86. 100 mg PO q 510h 87. 100 mg PO q 516h 88. 100 mg PO q 522h 89. 100 mg PO q 528h 90. 100 mg PO q 534h 91. 100 mg PO q 540h 92. 100 mg PO q 546h 93. 100 mg PO q 552h 94. 100 mg PO q 558h 95. 100 mg PO q 564h 96. 100 mg PO q 570h 97. 100 mg PO q 576h 98. 100 mg PO q 582h 99. 100 mg PO q 588h 100. 100 mg PO q 594h 101. 100 mg PO q 600h 102. 100 mg PO q 606h 103. 100 mg PO q 612h 104. 100 mg PO q 618h 105. 100 mg PO q 624h 106. 100 mg PO q 630h 107. 100 mg PO q 636h 108. 100 mg PO q 642h 109. 100 mg PO q 648h 110. 100 mg PO q 654h 111. 100 mg PO q 660h 112. 100 mg PO q 666h 113. 100 mg PO q 672h 114. 100 mg PO q 678h 115. 100 mg PO q 684h 116. 100 mg PO q 690h 117. 100 mg PO q 696h 118. 100 mg PO q 702h 119. 100 mg PO q 708h 120. 100 mg PO q 714h 121. 100 mg PO q 720h 122. 100 mg PO q 726h 123. 100 mg PO q 732h 124. 100 mg PO q 738h 125. 100 mg PO q 744h 126. 100 mg PO q 750h 127. 100 mg PO q 756h 128. 100 mg PO q 762h 129. 100 mg PO q 768h 130. 100 mg PO q 774h 131. 100 mg PO q 780h 132. 100 mg PO q 786h 133. 100 mg PO q 792h 134. 100 mg PO q 798h 135. 100 mg PO q 804h 136. 100 mg PO q 810h 137. 100 mg PO q 816h 138. 100 mg PO q 822h 139. 100 mg PO q 828h 140. 100 mg PO q 834h 141. 100 mg PO q 840h 142. 100 mg PO q 846h 143. 100 mg PO q 852h 144. 100 mg PO q 858h 145. 100 mg PO q 864h 146. 100 mg PO q 870h 147. 100 mg PO q 876h 148. 100 mg PO q 882h 149. 100 mg PO q 888h 150. 100 mg PO q 894h 151. 100 mg PO q 900h 152. 100 mg PO q 906h 153. 100 mg PO q 912h 154. 100 mg PO q 918h 155. 100 mg PO q 924h 156. 100 mg PO q 930h 157. 100 mg PO q 936h 158. 100 mg PO q 942h 159. 100 mg PO q 948h 160. 100 mg PO q 954h 161. 100 mg PO q 960h 162. 100 mg PO q 966h 163. 100 mg PO q 972h 164. 100 mg PO q 978h 165. 100 mg PO q 984h 166. 100 mg PO q 990h 167. 100 mg PO q 996h 168. 100 mg PO q 1002h 169. 100 mg PO q 1008h 170. 100 mg PO q 1014h 171. 100 mg PO q 1020h 172. 100 mg PO q 1026h 173. 100 mg PO q 1032h 174. 100 mg PO q 1038h 175. 100 mg PO q 1044h 176. 100 mg PO q 1050h 177. 100 mg PO q 1056h 178. 100 mg PO q 1062h 179. 100 mg PO q 1068h 180. 100 mg PO q 1074h 181. 100 mg PO q 1080h 182. 100 mg PO q 1086h 183. 100 mg PO q 1092h 184. 100 mg PO q 1098h 185. 100 mg PO q 1104h 186. 100 mg PO q 1110h 187. 100 mg PO q 1116h 188. 100 mg PO q 1122h 189	

Foliar application.

Gypsy moth (larvae)

Refer to Bagworm for use and limitation information.

Lace bugs

0.75 tbs or Foliar application.

SC/S/gal

water

(75% SC/S)

OF

3 tbls or

1.5 fl.oz

9.4% SC/L/

gal water

(9.4% SC/L)

OR

1.5 tbls or

0.75 £1.02

15.6% SC/L/

gal water

(15.6% SC/L)

—

(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

2.5 lb 1.5%
G/100 sq.ft
(1.5% G)

Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Do not apply more than 3 times per year.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Firethorn (continued)

@IQAHARA	Lygus bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IRAAABG	Scales (crawlers) (including cottonycushion scale, indian wax scale, and kuno scale)	
#3405801		1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&209.4015		or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015		
@ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITBDADA	Yellownecked caterpillar	
#3405801		0.75 tbls or 4.5 g 75% SC/S/gal water Foliar application.
&075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&209.4015		

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Firethorn (continued)

Yellownecked caterpillar (continued)

or
 1.5 tbs or
 0.75 fl.oz
 15.6% SC/L/
 gal water
 (15.6% SC/L)

&215.6015

/3505200

Flowering Almond

•IRACAAA
 #3505201

Aphids

0.5 tbs or Foliar application.
 3 g 75%
 SC/S/gal
 water

&075.0015

(75% SC/S)

or
 3 tbs or
 1.5 fl.oz
 9.4% SC/L/
 gal water
 (9.4% SC/L)

&209.4015

or
 1.5 tbs or
 0.75 fl.oz
 15.6% SC/L/
 gal water
 (15.6% SC/L)

&215.6015

•IVABAAA
 #3505201

Grasshoppers

Foliar application.

S3401601

Refer to Abelia, Grasshoppers, Foliar application
 for use and limitation information.

#3505202

Soil application.

S3401602

Refer to Abelia, Grasshoppers, Soil application
 for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3142900 <u>Flowering Cabbage</u>	
@ITBCCSA Cabbage looper #3142901	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
#209.4015 Grasshoppers @IVABAAA #3142901	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3142902	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITANAWA Omnivorous looper #3142901	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S)
/3505500 <u>Flowering Cherry</u>	
@ITBKABA Bagworm #3505501 #203.0019	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage de- pending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Flowering Cherry (continued)

①ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
①ITAUAEA #3505501	Eastern tent caterpillar	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
	or	
	3 tbls or 1.5 fl.oz	
	9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or 0.75 fl.oz	
	15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
#3505523	0.85 g/4 in. tree circum-	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005	ference at breast height (85% P/T)	
①ITABAIA	Fall webworm	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Flowering Cherry (continued)

Fall webworm (continued)

#3505523	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree.
#085.0005	(85% P/T)	To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

#ITAUAGA
#3505501

Forest tent caterpillar

#075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
#209.4015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	
#215.6015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
	(15.6% SC/L)	

#IVABAAA
#3505501

Grasshoppers

#3401601		Foliar application.
#3505502		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3401602		Soil application.
		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Flowering Cherry (continued)</u>		
①ITAXAIC Gypsy moth (larvae)		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
①IQAXAAA Lace bugs		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
①IQAMARA Lygus bugs		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
①ITBUAVA Obliquebanded leafroller		Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and limitation information.	
①ITBUBCA #3505501 Omnivorous leafroller	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
①ITAUADA Tent caterpillars		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
①ITAUAFA Western tent caterpillar		Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and limitation information.	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3505600	<u>Flowering Crabapple</u>		Do not apply more than 3 times per growing season. Apply at 28 day intervals. Phytotoxicity has occurred on the following crabapple varieties: hopa, ichonoski, malusfloribunda, pink perfection, red wine, and snow cloud.
•IRACAAA #3505601	Aphids	0.25 lb/100 gal water (75% SC/S)	Foliar application.
&075.0015			
•IMAAAEA #3505601	Leafrollers	0.25 lb/100 gal water (75% SC/S)	Foliar application.
&075.0015			
•ITAUADA #3505601	Tent caterpillars	0.25 lb/100 gal water (75% SC/S)	Foliar application.
&075.0015			
/3505900	<u>Flowering Pear</u>		
•IRACAAA #3505901	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
/3506000	<u>Flowering Plum</u>		
•IRACAAA #3506001	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Flowering Plum (continued)

@ITBKABA #3506001 &203.0019	Bagworm	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA	Cankerworms		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation information.
@ITAUAEA #3506001	Eastern tent caterpillar	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
&209.4015			
&215.6015			
@ITABAIA	Fall webworm		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation information.
@ITAUAGA	Forest tent caterpillar		Foliar application.
PITAUAEA			Refer to Eastern tent caterpillar for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Flowering Plum</u> (continued)		
@IVABAAA #3506001 S3401601 #3506002 S3401602	Grasshoppers Refer to Abelia, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	Foliar application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC PITBKABA @IQAXAAA PITBKABA @IQAHARA PITBKABA	Gypsy moth (larvae) Refer to Bagworm for use and limitation information. Lace bugs Refer to Bagworm for use and limitation information. Lygus bugs Refer to Bagworm for use and limitation information.	Foliar application. Refer to Bagworm for use and limitation information. Foliar application. Refer to Bagworm for use and limitation information.
@ITBDAIA #3506001 &075.0015	Redhumped caterpillar 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@ITAUADA PITBKABA @ITAUFA PITAUAEA	Tent caterpillars Refer to Bagworm for use and limitation information. Western tent caterpillar Refer to Eastern tent caterpillar for use and limitation information.	Foliar application. Refer to Bagworm for use and limitation information. Foliar application. Refer to Eastern tent caterpillar for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3406100 <u>Flowering Quince</u>		
@IRACAAA \$3406101 Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
/3110400 <u>Fuchsia</u>		
@IVABAAA \$3110401 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3110402		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRABAAA \$3110401 Whiteflies	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
/3110500 <u>Gaillardia</u>		
@IRABAAA \$3110501 Whiteflies	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3110600	<u>Garden Balsam</u>		
•IRACAAA	Aphids		
#3110601		0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
/3406300	<u>Gardenia</u>		
•IMOCAGA	Flower thrips		
#3406301		0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015		or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015			
•IVABAAA	Grasshoppers		
#3406301			Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3406302			Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
•IRAWAAA	Mealybugs (including citrus mealybug and longtailed mealybug)		Foliar application.
PIMOCAGA		Refer to Flower thrips for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Gardenia (continued)</u>		
©IRAAABG #3406301 #075.0015 #209.4015 #215.6015	Scales (crawlers) (including black scale, hemispherical scale, and tea scale) 1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
©IRABAAA PIMOCAGA /3110800	Whiteflies <u>Geranium</u>	Foliar application. Refer to Flower thrips for use and limitation information.
©ITBCBOA #3110801 #075.0015 #209.4015	Corn earworm 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
©IRARACA #3110801 #075.0015	Cottony cushion scale 1 tbls or 6 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Geranium</u> (continued)		
©IVABAAA #3110801 S3401601	Grasshoppers	Foliar application.
#3110802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
©ITBCBNA #3110801 &075.0015 /3111100	Tobacco budworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
©IMOCAGA #3111101 &075.0015	Flower thrips	0.75 tbls or Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&209.4015		
&215.6015		
©IMOCARA PIMOCAGA	Gladiolus thrips	Foliar application.
		Refer to Flower thrips for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Gladiolus</u> (continued)		
@IVABAAA #3111101 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3111102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IMOAAAA #3111101 Thrips	0.5 lb/100 gal water (75% SC/S)	Foliar application. Apply when pest first appears or at the tight flower bud stage.
#075.0015		
/3111200	<u>Gloxinia</u>	
@IRACAAA #3111201 Aphids	2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	Foliar application.
#209.4015		
#215.6015		
@IVABAAA #3111201 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3111202		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3111700	<u>Gypsophila</u>	
@IRACAAA #3111701 Aphids	0.5 lb/100 gal water (75% SC/S)	Foliar application. Apply when pest first appears or at the tight flower bud stage.
#075.0015		

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3506700	<u>Hackberry</u>	
#IVABAAA	Grasshoppers	
#3506701		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3506702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#IRAXAAA	Psyllids	
#3506701		0.75 tbls or Foliar application.
		4.5 g 75%
		SC/S/gal
		water
#075.0015		(75% SC/S)
		or
		3 tbls or
		1.5 fl.oz
		9.4% SC/L/
		gal water
#209.4015		(9.4% SC/L)
		or
		1.5 tbls or
		0.75 fl.oz
		15.6% SC/L/
		gal water
#215.6015		(15.6% SC/L)
#IRAAABG	Scales (crawlers) (including cottoncushion scale)	
#3506701		1 tbls or 6 g Foliar application. Apply 2 or 3
		75% SC/S/gal times at 7 to 10 day intervals.
		water
		Additional applications may be need-
#075.0015		ed if plants become reinfested.
		or
		3 tbls or
		1.5 fl.oz
		9.4% SC/L/
		gal water
#209.4015		(9.4% SC/L)
		or
		1.5 tbls or
		0.75 fl.oz
		15.6% SC/L/
		gal water
#215.6015		(15.6% SC/L)

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3406600	<u>Hawthorn</u>		
@IRACAAA \$3406601	Aphids	2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L)	Foliar application.
&209.4015		or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015			
@ITBKABA \$3406601 &203.0019	Bagworm	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA	Cankerworms		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hawthorn</u> (continued)		
●ITAUAEA #3406601 Eastern tent caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6075.0015		
6209.4015		
6215.6015		
●ITANACA Fall cankerworm		Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	
●ITABAIA Fall webworm		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
●ITAUAGA Forest tent caterpillar		Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	
●IVABAAA #3406601 Grasshoppers		Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3406602		Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hawthorn</u> (continued)		
©ITAXAIA Gypsy moth		Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	
©ITAXAIC Gypsy moth (larvae)		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
93406623	0.85 g/4 in. tree circumference at breast height	Injection treatment. Apply 4 days prior to or during early larval stage. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
6085.0005	(85% P/T)	
©IQAXAAA Lace bugs		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
©IQAMARA Lygus bugs		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
©ITANAVA Spring cankerworm		
93406601	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
6075.0015	(75% SC/S)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hawthorn</u> (continued)		
@ITAUADA Tent caterpillars		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITBDAGA #3406601 Variable oakleaf caterpillar	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015		
@ITAUFA Western tent caterpillar		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
/3506800 <u>Hemlock</u>		
@IVABAAA #3506801 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3506802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIA #3506801 Gypsy moth	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
#075.0015		
#209.4015		

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hemlock</u> (continued)		
Gypsy moth (continued)		
	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@IRAAABG	Scales (crawlers) (including cottonycushion scale, hemlock scale, indian wax scale, and pine needle scale)	
\$3506801	1 tbs or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
&075.0015	(75% SC/S)	ed if plants become reinfested.
	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015		
	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@ILAVAAA	Spider mites (including spruce spider mite)	
\$3506801	1 tbs or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
&075.0015	(75% SC/S)	ed if plants become reinfested.
	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
/3406900	<u>Hibiscus</u>	
@IRACAAA	Aphids	
\$3406901	0.5 tbs or	Foliar application.
	3 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hibiscus</u> (continued)		
@ITBKABA #3406901 &203.0019	Bagworm -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITABAIA	Fall webworm	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IVABAAA #3406901	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3406902		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IQAXAAA	Lace bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Hibiscus</u> (continued)		
@IQAMARA Lygus bugs		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
@IRAAABG \$3406901 \$075.0015	Scales (crawlers) (including black scale, cottonycushion scale, hemispherical scale, and indian wax scale) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be needed if plants become reinfested. (75% SC/S)	
	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
\$209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
\$215.6015		
@ITAUADA Tent caterpillars		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
/3506900 <u>Hickory</u>		
@ITBKABA \$3506901 \$203.0019	Bagworm -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Hickory (continued)</u>	
@ITANABA Cankerworms	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@ITANACA Fall cankerworm #3506901	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
@ITABAIA Fall webworm #3506901	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
PITBKABA	Refer to Bagworm for additional use and limitation information.
@ITAXAIA Gypsy moth #3506901	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
@ITAXAIC Gypsy moth (larvae)	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IQAXAAA Lace bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IQAHARA Lygus bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Hickory (continued)

@ITBUAVA #3506901	Obliquebanded leafroller	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITBUBCA #3506901	Omnivorous leafroller	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITANAVA #3506901	Spring cankerworm	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITAXAAA #3506901	Tussock moths	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITBDABA #3506901	Walnut caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		
@ITBDADA #3506901	Yellownecked caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3407000	<u>Holly</u>		
●ITBKABA	Bagworm	--	Foliar application. Apply for a
#3407001		(3% PrL)	period of 5 seconds per 100 square
&203.0019			feet for light infestation and for a
			period of 10 seconds per 100 square
			feet for heavy infestation. Dosage
			given based on plants 2 feet in
			height. Adjust the dosage de-
			pending on height of foliage. Use
			the higher dosage for spot treatment
			of individual plants and localized
			infestation.
●ITANABA	Cankerworms		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation informa-
			tion.
●ITABAIA	Fall webworm		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation informa-
			tion.
●IVABAAA	Grasshoppers		Foliar application.
#3407001			
S3401601			Refer to Abelia, Grasshoppers, Foliar application
			for use and limitation information.
#3407002			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application
			for use and limitation information.
●ITAXAIC	Gypsy moth (larvae)		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation informa-
			tion.
●IQAXAAA	Lace bugs		Foliar application.
PITBKABA			Refer to Bagworm for use and limitation informa-
			tion.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Holly</u> (continued)		
@IMAAAGA #3407001	Leafminers	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
#3407002	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. For control of birch leaf-miner, apply in the early spring when leaves are unfolding (leaf puncture stage) or at the earliest sign of leaf damage. Repeat application in 28 to 42 days for second generation.
&001.5004		
@IQAMARA	Lygus bugs	
		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITBUAVA #3407001	Obliquebanded leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBUBCA #3407001	Omnivorous leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Holly</u> (continued)	
●IRAXAAA #3407001	Psyllids 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
6075.0015	(75% SC/S) or
6209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015	
●IRAAABG #3407001	Scales (crawlers) (including black scale, hemispherical scale, indian wax scale, and tea scale)
6075.0015	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested.
6075.0015	or
6209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Holly (continued)</u>		
@ILAVAAA #3407001	Spider mites (including southern red spider mite)	
	0.75 tbls or	Foliar application. Apply 2 or 3
	4.5 g 75%	times at 7 to 10 day intervals.
	SC/S/gal	Additional applications may be need-
	water	ed if plants become reinfested.
&075.0015	(75% SC/S)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	
@ITAUDA	Tent caterpillars	
		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation informa-
		tion.
@ITAXAAA #3407001	Tussock moths	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
/3112100	<u>Hollyhock</u>	
@IMOCAGA #3112101	Flower thrips	
	0.75 tbls or	Foliar application. Apply 2 or 3
	4.5 g 75%	times at 7 to 10 day intervals.
	SC/S/gal	Additional applications may be need-
	water	ed if plants become reinfested.
&075.0015	(75% SC/S)	
/3507000	<u>Honeylocust</u>	
@IVABAAA #3507001	Grasshoppers	
		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application
		for use and limitation information.
#3507002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application
		for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Honeylocust (continued)

#IOAHBCA
#3507001

Honeylocust podgall midge

0.75 tbls or Foliar application.

4.5 g 75%

SC/S/gal

water

(75% SC/S)

&075.0015

#ITAOACA
#3507001

Mimosa webworm

0.75 tbls or Foliar application.

4.5 g 75%

SC/S/gal

water

(75% SC/S)

&075.0015

or

3 tbls or

1.5 fl.oz

9.4% SC/L/

gal water

(9.4% SC/L)

&209.4015

or

1.5 tbls or

0.75 fl.oz

15.6% SC/L/

gal water

(15.6% SC/L)

&215.6015

#ILAVAAA
#3507001

Spider mites (including honeylocust spider mite)

1 tbls or 6 g Foliar application. Apply 2 or 3

75% SC/S/gal times at 7 to 10 day intervals.

water

Additional applications may be needed if plants become reinfested.

(75% SC/S)

or

1.5 tbls or

0.75 fl.oz

15.6% SC/L/

gal water

(15.6% SC/L)

&215.6015

#ITBDABA
#3507001

Walnut caterpillar

0.75 tbls or Foliar application.

4.5 g 75%

SC/S/gal

water

(75% SC/S)

&075.0015

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3407300	<u>Hydrangea</u>	
@IVABAAA #3407301	Grasshoppers	1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) Foliar application. Use in conjunction with soil application.
#215.6015		
#3407302		1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) Soil application. Apply to soil beneath plants. Use in conjunction with foliar application.
#215.6015		
@ILAVBEA #3407301	Twospotted spider mite	1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#075.0015		
#215.6015		
/3407600	<u>Ivy</u>	
@IRACAAA #3407601	Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) Foliar application.
#075.0015		
#209.4015		
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ivy (continued)</u>		
#IVABAAA #3407601	Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3407602	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
#IRAWAAA #3407601	Mealybugs (including citrus mealybug)	
#075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
#209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
/3507300	<u>Juniper</u>	
#ITBKABA #3507301	Bagworm	Foliar application.
#075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Juniper</u> (continued)		
Bagworm (continued)		
	or	
	1.5 tbs or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	
	--	
&203.0019	(3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
Cankerworms		
@ITANABA	--	
\$3507301	(3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
&203.0019		
Cypress tip moth		
@ITBWAIA		
\$3507301	0.75 tbs or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
Fall webworm		
@ITABAIA		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Juniper</u> (continued)	
•IVABAAA #3507301 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3507302	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
•ITAXAIC Gypsy moth (larvae)	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
•IQAXAAA Lace bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
•IQAHARA Lygus bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
•ILAVAAA #3507301 Spider mites (including spruce spider mite)	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested. or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#075.0015	
#215.6015	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Juniper</u> (continued)	
@IRAAEA #3507301	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S) or
#209.4015	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
#215.6015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
@ITAUADA Tent caterpillars	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation in- formation.
/3124800	<u>Kalanchoe</u>
@ITBCCSA #3124801	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S)
@ITANAWA #3124801	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
#075.0015	(75% SC/S)

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	<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3408300	<u>Lantana</u>	
®IVABAAA #3408301	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3408302		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
®IRABAAA #3408301	Whiteflies	Foliar application.
S3110401		Refer to Fuchsia, Whiteflies, Foliar application for use and limitation information.
/3408800	<u>Liqustrum</u>	
®IVABAAA #3408801	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3408802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
®IRABAAA #3408801	Whiteflies	Foliar application.
S3110401		Refer to Fuchsia, Whiteflies, Foliar application for use and limitation information.
/3408900	<u>Lilac</u>	
®IVABAAA #3408901	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3408902		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Lilac</u> (continued)		
@IRAAABG #3408901	Scales (crawlers)	Foliar application.
S3401601		Refer to Abelia, Scales (crawlers), Foliar application for use and limitation information.
/3507500	<u>Linden</u>	
@IRACAAA #3507501	Aphids	0.5 tbs or 3 g 75% SC/S/gal water (75% SC/S) Foliar application.
6075.0015		
@ITBKABA #3507501	Bagworm	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) Foliar application.
6075.0015		
6203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA #3507501 6203.0019	Cankerworms -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Linden</u> (continued)	
@ITANACA #3507501 Fall cankerworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
@ITABAIA Fall webworm	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IVABAAA #3507501 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3507502	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC Gypsy moth (larvae)	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
@INBPAZA #3507501 Japanese beetle	4 tbls or Foliar application. Repeat at 7 2 fl.oz to 10 day intervals as needed. 9.4% SC/L/ gal water (9.4% SC/L) or 2 tbls or 1 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6209.4015	
6215.6015	
@IQAXAAA Lace bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Linden</u> (continued)	
@IQAHARA	Lygus bugs Foliar application.
PITANABA	Refer to Cankermolds for use and limitation information.
@ITANAVA \$3507501	Spring cankerworm 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015	
@ITAUADA	Tent caterpillars Foliar application.
PITANABA	Refer to Cankermolds for use and limitation information.
@ITAXADA \$3507501	Whitemarked tussock moth 3 tbls or Foliar application. 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&209.4015	
&215.6015	
@ITBDADA \$3507501	Yellownecked caterpillar 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&075.0015	
&209.4015	

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Linden (continued)

Yellownecked caterpillar (continued)

or
1.5 tbls or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

6215.6015

/3507700

Locust

0ITBKABA
#3507701

Bagworm

0.75 tbls or Foliar application.
4.5 g 75%
SC/S/gal
water
(75% SC/S)

6075.0015

6203.0019

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

0ITANABA
#3507701
6203.0019

Cankerworms

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

0ITABAIA

Fall webworm

Foliar application.

PITANABA

Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Locust (continued)</u>		
©ITAXAIC Gypsy moth (larvae) PITANABA		Foliar application. Refer to Cankerworms for use and limitation information.
©ILAVAGA Honeylocust spider mite \$3507723 &085.0005	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
©IQAXAAA Lace bugs PITANABA		Foliar application. Refer to Cankerworms for use and limitation information.
©IMAAAGA Leafminers \$3507701 &075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
©IQAHARA Lygus bugs PITANABA		Foliar application. Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Locust (continued)</u>		
@ITAOACA #3507723 Mimosa webworm	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005		
@ITBUAVA #3507701 Obliquebanded leafroller	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBUBCA #3507701 Omnivorous leafroller	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBDAIA #3507701 Redhumped caterpillar	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITAUADA Tent caterpillars		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3508200	<u>Magnolia</u>		
@IVABAAA #3508201	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3508202			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3508201	Scales (crawlers) (including black scale, cottoncushion scale, and indian wax scale)	1 tbls or 6 g	Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals.
&075.0015		water	Additional applications may be needed if plants become reinfested.
		(75% SC/S)	
		or	
		3 tbls or	
		1.5 fl.oz	
		9.4% SC/L/	
		gal water	
&209.4015		(9.4% SC/L)	
		or	
		1.5 tbls or	
		0.75 fl.oz	
		15.6% SC/L/	
		gal water	
&215.6015		(15.6% SC/L)	
/3409000	<u>Mahonia</u>		
@ITANAYA #3409001	Barberry looper	0.75 tbls or	Foliar application.
		4.5 g 75%	
		SC/S/gal	
		water	
&075.0015		(75% SC/S)	
@ITBCCSA #3409001	Cabbage looper	0.75 tbls or	Foliar application.
		4.5 g 75%	
		SC/S/gal	
		water	
&075.0015		(75% SC/S)	

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Maple (continued)

Aphids (continued)

		or 1 tbs or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015			
63508323		0.85 g/4 in.	Injection treatment. Apply when
		tree circum-	wingless forms first appear. Each
		ference at	implant cartridge contains 0.85 gram
		breast	actual acephate. The number of im-
6085.0005		height	plant cartridges needed depends on
		(85% P/T)	the diameter breast height of the
			tree. To determine the number of
			implant cartridges needed, multiply
			the trunk diameter by 3.14 and di-
			vide by 4. Refer to general warn-
			ings under Ornamental Plants (herba-
			ceous, woody shrubs, trees and
			vines) for specific information and
			instructions on implant cartridge
			application.
6ITBKABA	Bagworm		
63508301		0.75 tbs or	Foliar application.
		4.5 g 75%	
		SC/S/gal	
		water	
6075.0015		(75% SC/S)	
		or	
		3 tbs or	
		1.5 fl.oz	
		9.4% SC/L/	
6209.4015		gal water	
		(9.4% SC/L)	
		or	
		1.5 tbs or	
		0.75 fl.oz	
		15.6% SC/L/	
6215.6015		gal water	
		(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Mahonia</u> (continued)		
#IVABAAA #3409001 S3401601 #3409002 S3401602	Grasshoppers Omnivorous looper Whiteflies Maple Aphids	Foliar application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Abelia, Grasshoppers, Soil application for use and limitation information. 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) 3 tbls or Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested. 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) 0.5 tbls or Foliar application. 3 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)

Use pattern continued on the next page.

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ACEPHATE

Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Maple (continued)

Bagworm (continued)

&203.0019

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

©ITANABA
#3508301
&203.0019

Cankerworms

--
(3% PrL)

Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

©ITAUAEA
#3508301

Eastern tent caterpillar

0.75 tbls or Foliar application.
4.5 g 75%
SC/S/gal
water

&075.0015

(75% SC/S)
or

3 tbls or
1.5 fl.oz
9.4% SC/L/
gal water

&209.4015

(9.4% SC/L)
or

1.5 tbls or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

&215.6015

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Maple (continued)

Eastern tent caterpillar (continued)

#3508323	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree.
&085.0005	(85% P/T)	To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

#ITANACA #3508301	Fall cankerworm	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water	
&209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water	
&215.6015		(15.6% SC/L)	

#ITABAIA	Fall webworm	Foliar application.
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PITANABA	Refer to Cankerworms for use and limitation information.
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#ITAUAGA	Forest tent caterpillar	Foliar application.
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PITANACA	Refer to Fall cankerworm for use and limitation information.
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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Maple</u> (continued)		
@IVABAAA #3508301	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3508302		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITBNAPA	Greenstriped mapleworm	Foliar application.
PITANACA		Refer to Fall cankerworm for use and limitation information.
@ITAXAIA	Gypsy moth	Foliar application.
PITANACA		Refer to Fall cankerworm for use and limitation information.
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
#3508323	0.85 g/4 in. tree circumference at breast height	Injection treatment. Apply 4 days prior to or during early larval stage. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005	(85% P/T)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Maple</u> (continued)		
@IQAXAAA Lace bugs		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@IQAHARA Lygus bugs		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@ITBGCJA \$3508301	Maple shoot moth complex 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
&075.0015		
&209.4015		
&215.6015		
&3508302	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Do not apply more than 3 times per year.
&001.5004		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Maple</u> (continued)		
@ITBUAWA #3508301 &209.4015 &215.6015	Omnivorous leaf-tier 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@ITBDAFA #3508301 &075.0015	Saddled prominent 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@IRAAABC #3508301 &209.4015 &215.6015	Scales (crawlers) 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
@ITANAVA #3508301 &075.0015	Spring cankerworm 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
@ITAUADA PITANABA	Tent caterpillars Refer to Cankerworms for use and limitation in- formation.	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Maple</u> (continued)		
@ITAXAA	Tussock moths (including whitemarked tussock moth)	Foliar application.
PITANACA		Refer to Fall cankerworm for use and limitation information.
@ITAUAFA	Western tent caterpillar	Foliar application.
PITANACA		Refer to Fall cankerworm for use and limitation information.
/3113700	<u>Marigold</u>	
@IMOCAGA #3113701	Flower thrips	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)
#075.0015		Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#209.4015		
#215.6015		
@IVABAAA #3113701	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3113702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Marigold</u> (continued)		
@IRAFAAA #3113702	Leafhoppers	2.5 lb 1.5% G/100 sq.ft (1.5% G) Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
6001.5004		
@IMAAAGA #3113701	Leafminers	Foliar application.
6209.4015		3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015		
@ITBMBPA #3113701	Sunflower moth	Foliar application.
6075.0015		0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6209.4015		
6215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Marigold (continued)</u>		
@ILAVBEA \$3113701	Twospotted spider mite	
	1 tbls or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
\$075.0015	(75% SC/S)	ed if plants become reinfested.
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
\$215.6015	(15.6% SC/L)	
/3513600	<u>Mimosa</u>	
@IVABAAA \$3513601	Grasshoppers	
		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application
		for use and limitation information.
\$3513602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application
		for use and limitation information.
@ITAOACA \$3513601	Mimosa webworm	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
\$075.0015	(75% SC/S)	
	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
\$209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
\$215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Mimosa (continued)

Mimosa webworm (continued)

#3513623	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree.
#085.0005	(85% P/T)	To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

/3409400 Mock-Orange

@IRACAAA Aphids

#3409401	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
#209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	

#215.6015

@IVABAAA Grasshoppers

#3409401 Foliar application.

S3401601 Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

#3409402 Soil application.

S3401602 Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3513500	<u>Mulberry</u>	
@IVABAAA #3513501	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3513502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3513501	Scales (crawlers)	Foliar application.
S3401601		Refer to Abelia, Scales (crawlers), Foliar application for use and limitation information.
/3410000	<u>Nandina</u>	
@IVABAAA #3410001	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3410002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3410001	Scales (crawlers)	Foliar application.
S3401601		Refer to Abelia, Scales (crawlers), Foliar application for use and limitation information.
/3114500	<u>Nephtytis</u>	
@IVABAAA #3114501	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3114502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Nephthytis</u> (continued)		
@IRAWAMA #3114501 Longtailed mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#209.4015		
#215.6015		
/3509300 <u>Oak</u>		
@IRACAAA #3509301 Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	Foliar application.
#075.0015		
#209.4015		
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
Oak (continued)		
Aphids (continued)		
\$3509323	0.85 g/4 in. tree circumference at breast height (85% P/T)	Injection treatment. Apply when wingless forms first appear. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005		
@ITBKABA \$3509301 &203.0019	Bagworm	-- (3% PrL)
		Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITALABA \$3509301	California oakworm	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S)
		Foliar application.
&075.0015	Cankerworms	Foliar application.
@ITANABA		
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
@ITAUAEA #3509301	Eastern tent caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
&075.0015		
&209.4015		
&215.6015		
#3509323	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specif- ic information and instructions on implant cartridge application.
&085.0005		
@ITANACA #3509301	Fall cankerworm 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITABAIA #3509301	Fall webworm 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
Fall webworm (continued)		
PITBKABA	Refer to Bagworm for additional use and limitation information.	
#3509323	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree.
#085.0005	(85% P/T)	To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
Forest tent caterpillar		
@ITAUAGA #3509301	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
#075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
#209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
#215.6015	(15.6% SC/L)	
Grasshoppers		
@IVABAAA #3509301		Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3509302		Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Oak</u> (continued)	
●ITAXAIA Gypsy moth	Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.
●ITAXAIC Gypsy moth (larvae)	Foliar application.
PITBKABA	Refer to Bagworm for additional use and limitation information.
#3509323	0.85 g/4 in. tree circum- prior to or during early larval ference at stage. Each implant cartridge con- breast tains 0.85 gram actual acephate.
#085.0005	height The number of implant cartridges (85% P/T) needed depends on the diameter breast height of the tree. To de- termine the number of implant car- tridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Or- namental Plants (herbaceous, woody shrubs, trees and vines) for specif- ic information and instructions on implant cartridge application.
●ITASAGA Juvenal dusky wing #3509301	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
@IQAXAAA \$3509301	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water	
&075.0015	(75% SC/S) or	
&209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&215.6015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
PITBKABA	Refer to Bagworm for additional use and limitation information.	
@IMAAAGA	Leafminers	
PITAUAGA	Foliar application.	
@IQAMARA	Lygus bugs	
PITBKABA	Foliar application.	
@ITBUAIA	Oak webworm	
PITAUAGA	Foliar application.	
@ITBUAVA	Obliquebanded leafroller	
PITAUAGA	Foliar application.	
	Refer to Forest tent caterpillar for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
●ITBUBCA #3509301	Omnivorous leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
●ITBNASA	Orangestriped oakworm	
		Foliar application.
PITAUAGA		Refer to Forest tent caterpillar for use and limitation information.
●ITBDAFA #3509301	Saddled prominent	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
●IRAAABG #3509301	Scales (crawlers) (including cottoncushion scale)	
	1 tbls or 6 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		
	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015		
	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
@ILAVAAA \$3509301 &075.0015	Spider mites (including southern red mite)	
	1 tbls or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
&215.6015	water	Additional applications may be need-
	(75% SC/S)	ed if plants become reinfested.
	or	
&215.6015	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
@ITANAVA \$3509301 &075.0015	gal water	
	(15.6% SC/L)	
@ITANAVA \$3509301 &075.0015	Spring cankerworm	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
&075.0015	SC/S/gal	
	water	
	(75% SC/S)	
@ITAUADA PITBKABA	Tent caterpillars	
		Foliar application.
@ITAXAAA PITAUAGA	Refer to Bagworm for use and limitation informa-	
	tion.	
@ITAXAAA PITAUAGA	Tussock moths (including whitemarked tussock moth)	
		Foliar application.
@ITBDAGA \$3509301 &075.0015	Refer to Forest tent caterpillar for use and limi-	
	tation information.	
@ITBDAGA \$3509301 &075.0015	Variable oakleaf caterpillar	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
&075.0015	SC/S/gal	
	water	
	(75% SC/S)	
@ITAUAFA PITAUAGA	Western tent caterpillar	
		Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and	
	limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Oak</u> (continued)		
@ITBDADA	Yellownecked caterpillar	Foliar application.
PITAUAGA	Refer to Forest tent caterpillar for use and limitation information.	
/3410200	<u>Oleander</u>	
@IMOCAGA \$3410201	Flower thrips	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		or 3 tbls or 1.5 fl.oz 9.4% SC/L/gal water
&209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water
&215.6015		(15.6% SC/L)
@IVABAAA \$3410201	Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
\$3410202	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
@IRAWAAA	Mealybugs (including citrus mealybug and longtailed mealybug) Foliar application.	
PIMOCAGA	Refer to Flower thrips for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Oleander (continued)

@ITBUAVA #3410201	Obliquebanded leafroller	
	0.75 tbs or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
	or	
	3 tbs or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbs or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	
@ITAJADA	Oleander caterpillar	
		Foliar application.
PITBUAVA		Refer to Obliquebanded leafroller for use and limitation information.
@ITBUBCA #3410201	Omnivorous leafroller	
	0.75 tbs or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
@IRAAABG #3410201	Scales (crawlers) (including black scale, cottoncushion scale, and hemispherical scale)	
	1 tbs or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
&075.0015	(75% SC/S)	ed if plants become reinfested.
	or	
	3 tbs or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	

Use pattern continued on the next page.

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Site and Pest

Dosages and Tolerance, Use, Limitations
Formulation(s)

Oleander (continued)

Scales (crawlers) (including black scale, cottoncushion scale, and hemispherical scale) (continued)

or
1.5 tbs or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

&215.6015

/3114700

Orchids

@IVABAAA

Grasshoppers

#3114701

Foliar application.

S3401601

Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

#3114702

Soil application.

S3401602

Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

@IRAWAAA

Mealybugs (including citrus mealybug)

#3114701

0.75 tbs or Foliar application. Apply 2 or 3
4.5 g 75% times at 7 to 10 day intervals.
SC/S/gal Additional applications may be need-
water ed if plants become reinfested.
(75% SC/S)

&075.0015

or
3 tbs or
1.5 fl.oz
9.4% SC/L/
gal water
(9.4% SC/L)

&209.4015

or
1.5 tbs or
0.75 fl.oz
15.6% SC/L/
gal water
(15.6% SC/L)

&215.6015

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Orchids (continued)</u>		
@IRAAABG \$3114701 &075.0015	Scales (crawlers) (including black scale, hemispherical scale, and tea scale) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be needed if plants become reinfested. (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&209.4015		
&215.6015		
/3900100	<u>Ornamental Ferns</u>	
@IRAWAAA \$3900101	Mealybugs 0.75 tbls or Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. 4.5 g 75% Additional applications may be needed if plants become reinfested. SC/S/gal water (75% SC/S)	
&075.0015		
/3500000	<u>Ornamental Trees</u>	
Do not apply to edible crops. Do not apply to balm of gilead, cottonwood, and lombardy poplar. Before treating large plantings in nursery crops, spray only a few plants and observe 14 days for phytotoxicity. Use patterns in this site do not apply to flowering crabapple. For specific directions refer to flowering crabapple in this report.		
@IRACAAA \$3500001 &075.0015	Aphids 0.25 lb/100 Foliar application. gal water (75% SC/S)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ornamental Trees</u> (continued)		
@ITBKABA #3500001 &075.0015	Bagworm 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@ISBEAMA #3500001 &075.0015	Birch leafminer 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@ITALABA #3500001 &075.0015	California oakworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAXAEC #3500001 &075.0015	Douglas-fir tussock moth (larvae) 0.5 lb/100 gal water (75% SC/S)	Foliar application.
@ITANACA #3500001 &075.0015	Fall cankerworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAXAIC #3500001 &075.0015	Gypsy moth (larvae) 1 lb/100 gal water (75% SC/S)	Foliar application. Mist blower application. Apply a suitable spreader sticker for improved control.
&075.0015	0.5 lb/100 gal water (75% SC/S)	Foliar application. Hydraulic spray application. Apply a suitable spreader sticker for improved control.
@IQAXAAA #3500001 &075.0015	Lace bugs 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@IMAAAEA #3500001 &075.0015	Leafrollers 0.25 lb/100 gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ornamental Trees</u> (continued)		
@ITGBLC \$3500001 6075.0015	Nantucket pine tip moth (larvae) 0.75 lb/100 gal water (75% SC/S)	Foliar application. Consult State Cooperative Agricultural Extension Service for timing information. Repeat applications may be required for subsequent generations.
@INASABJ \$3500001 6075.0015	Root weevils (adults) 0.75 lb/100 gal water (75% SC/S)	Foliar application. Apply when first feeding damage occurs. Repeat at 28 day intervals until next heavy frost.
@IRAAABG \$3500001 6075.0015	Scales (crawlers) 0.5 lb/100 gal water (75% SC/S)	Foliar application. Repeat at 14 day intervals as needed.
@ITANAVA \$3500001 6075.0015	Spring cankerworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAUADA \$3500001 6075.0015	Tent caterpillars 0.75 lb/100 gal water (75% SC/S)	Foliar application. Mist blower application.
@ITAAAMA \$3500001 6075.0015	Webworms 0.5 lb/100 gal water (75% SC/S)	Foliar application.
/3400400	<u>Ornamental Woody Shrubs</u>	Do not apply to edible crops. Do not apply to huckleberry, balm of gilead, and <u>Viburnum suspensum</u> . Before treating large plantings in nursery crops, spray only a few plants and observe 14 days for phytotoxicity.
@IRACAAA \$3400401 6075.0015	Aphids 0.25 lb/100 gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ornamental Woody Shrubs (continued)</u>		
@ITBKABA #3400401 6075.0015	Bagworm 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@ISBEAMA #3400401 6075.0015	Birch leafminer 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@ITALABA #3400401 6075.0015	California oakworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAXAEC #3400401 6075.0015	Douglas-fir tussock moth (larvae) 0.5 lb/100 gal water (75% SC/S)	Foliar application.
@ITANACA #3400401 6075.0015	Fall cankerworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAXAIC #3400401 6075.0015	Gypsy moth (larvae) 1 lb/100 gal water (75% SC/S)	Foliar application. Mist blower application. Apply a suitable spreader sticker for improved control.
6075.0015	0.5 lb/100 gal water (75% SC/S)	Foliar application. Hydraulic spray application. Apply a suitable spreader sticker for improved control.
@IQAXAAA #3400401 6075.0015	Lace bugs 0.25 lb/100 gal water (75% SC/S)	Foliar application.
@IMAAAEE #3400401 6075.0015	Leafrollers 0.25 lb/100 gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ornamental Woody Shrubs (continued)</u>		
@ITBGBLC \$3400401 \$075.0015	Nantucket pine tip moth (larvae) 0.75 lb/100 gal water (75% SC/S)	Foliar application. Consult State Cooperative Agricultural Extension Service for timing information. Repeat applications may be required for subsequent generations.
@INASABJ \$3400401 \$075.0015	Root weevils (adults) 0.75 lb/100 gal water (75% SC/S)	Foliar application. Repeat at 28 day intervals until the next heavy frost.
@IRAAABG \$3400401 \$075.0015	Scales (crawlers) 0.5 lb/100 gal water (75% SC/S)	Foliar application. Repeat at 14 day intervals as needed.
@ITANAVA \$3400401 \$075.0015	Spring cankerworm 0.25-0.5 lb/ 100 gal water (75% SC/S)	Foliar application. Use the higher dosage when larger larvae are present.
@ITAUADA \$3400401 \$075.0015	Tent caterpillars 0.75 lb/100 gal water (75% SC/S)	Foliar application. Mist blower application.
@ITAAAMA \$3400401 \$075.0015	Webworms 0.5 lb/100 gal water (75% SC/S)	Foliar application. Repeat at 14 day intervals as needed.
/3419900	<u>Osmanthus</u>	
@IVABAAA \$3419901 \$3401601	Grasshoppers	Foliar application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3419902 \$3401602		Soil application. Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Osmanthus</u> (continued)		
@IRAAABG #3419901	Scales (crawlers)	Foliar application.
S3401601		Refer to Abelia, Scales (crawlers), Foliar application for use and limitation information.
/3410600	<u>Pachysandra</u>	
@IVABAAA #3410601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3410602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ILAVBEA #3410601	Twospotted spider mite	1.5 tbls or Foliar application. Apply 2 or 3 0.75 fl.oz times at 7 to 10 day intervals. 15.6% SC/L/ Additional applications may be need- gal water ed if plants become reinfested. (15.6% SC/L)
&215.6015		
/3509700	<u>Palm</u>	
@IRACAAA #3509701	Aphids	2 tbls or Foliar application. 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&209.4015		
&215.6015		
@IRAHBBA #3509701	Black scale	1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested.
&075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Palm (continued)</u>		
01RARACA Cottonycushion scale		Foliar application.
PIRAHBBA		Refer to Black scale for use and limitation information.
01VABAAA #3509701 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3509702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
01RAHBAA Hemispherical scale		Foliar application.
PIRAHBBA		Refer to Black scale for use and limitation information.
01IRAKAZA Tea scale		Foliar application.
PIRAHBBA		Refer to Black scale for use and limitation information.
/3114900 <u>Pansies</u>		
01IRACAAA #3114901 Aphids	0.5 tbs or 3 g 75% SC/S/gal water	Foliar application.
#075.0015	(75% SC/S)	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3410900	<u>Periwinkle</u>		
@IRACAAA	Aphids		
#3410901		0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#075.0015			
#209.4015			
#215.6015			
@IMOCAGA	Flower thrips		
#3410901		0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#075.0015			
@IVABAAA	Grasshoppers		
#3410901			Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3410902			Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
/3115400	<u>Petunias</u>		
@IRACAAA	Aphids		
#3115402		2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
#001.5004			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Petunias</u> (continued)		
@ITBCCNA \$3115401	Beet armyworm	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	
@ITBCCSA \$3115401	Cabbage looper	
	0.75 tbls or	Foliar application.
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
@ITBCBOA \$3115401	Corn earworm	
	3 tbls or	Foliar application.
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
@ITBCCOA	Fall armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Petunias</u> (continued)		
@IMOCAGA #3115401 Flower thrips	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
#075.0015		
#209.4015		
#215.6015		
@IVABAAA #3115401 Grasshoppers		Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3115402		Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
@ITAAAOA #3115402 Loopers	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to the top 1 to 2 inches of soil. Plant seed or set plants and water thoroughly.
#001.5004		
@ITANAWA Omnivorous looper		Foliar application.
PITBCCSA	Refer to Cabbage looper for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>	
<u>Petunias</u> (continued)			
@ITBCCWA \$3115401	Rose budworm	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015			
@ITBCCLA	Southern armyworm		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.	
@ITBCCQA	Yellowstriped armyworm		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.	
/3115500	<u>Philodendron</u>		
@IRAWAJA \$3115501	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015			
&215.6015			
@IVABAAA \$3115501	Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
\$3115502		Soil application.	
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Philodendron</u> (continued)		
01RAWAMA Longtailed mealybug		Foliar application.
PIRAWAJA	Refer to Citrus mealybug for use and limitation information.	
01LAVBEA 03115501	Twospotted spider mite 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
0215.6015 /3115600	<u>Phlox</u>	
01LAVBEA 03115601	Twospotted spider mite 1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
0075.0015 0215.6015 /3411000	<u>Photinia</u>	
01RACAAA 03411001	Aphids 0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
0075.0015 0209.4015 0215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Photinia</u> (continued)		
Aphids (continued)		
\$3411002	2.5 lb 1.5% G/100 sq.ft	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.
&001.5004	(1.5% G)	
@IVABAAA	Grasshoppers	
\$3411001		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3411002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3509800	<u>Pine</u>	
@ITBKABA	Bagworm	
\$3509801	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pine (continued)</u>		
<u>Bagworm (continued)</u>		
&203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA #3509801 &203.0019	Cankerworms -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ISA0AMA #3509801	European pine sawfly	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pine (continued)</u>		
@ITABAIA Fall webworm		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@IVABAAA \$3509801	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3509802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIA Gypsy moth		Foliar application.
PISAOAMA		Refer to European pine sawfly for use and limitation information.
@ITAXAIC Gypsy moth (larvae)		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
\$3509823	0.85 g/4 in. tree circumference at breast height	Injection treatment. Apply 4 days prior to or during early larval stage. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter
6085.0005	(85% P/T)	breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

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Site and Pest

Dosages and Tolerance, Use, Limitations
Formulation(s)

Pine (continued)

@ITAMXYA \$3509823	Jeffrey pine needleminers	0.85 g/4 in. Injection treatment. Apply during tree circum- peak moth flight and prior to larvae ference at mining. Each implant cartridge con- breast tains 0.85 gram actual acephate. height The number of implant cartridges (85% P/T) needed depends on the diameter breast height of the tree. To de- termine the number of implant car- tridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Or- namental Plants (herbaceous, woody shrubs, trees and vines) for specif- ic information and instructions on implant cartridge application.
\$085.0005		
@IQAXAAA	Lace bugs	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation in- formation.
@IQAMARA	Lygus bugs	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation in- formation.
@ITBGBLA	Nantucket pine tip moth	Foliar application.
PISAOAMA		Refer to European pine sawfly for use and limita- tion information.
@ITBGBLC \$3509823	Nantucket pine tip moth (larvae)	0.85 g/4 in. Injection treatment. Apply 4 days tree circum- prior to anticipated larval feeding ference at stage. Each implant cartridge con- breast tains 0.85 gram actual acephate. height The number of implant cartridges (85% P/T) needed depends on the diameter breast height of the tree. To de- termine the number of implant car- tridges needed, multiply the trunk diameter by 3.14 and divide by 4.
\$085.0005		

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Pine (continued)

Nantucket pine tip moth (larvae) (continued)

Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

@ISAXAEA \$3509801	Nesting pine sawfly	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
@ISAOABA \$3509801	Pine sawflies	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
@ITBUAOA \$3509801	Pine tube moth	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
@ISAOAGA	Redheaded pine sawfly		Foliar application.
PISAOAMA			Refer to European pine sawfly for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pine (continued)</u>		
@IRAAABG #3509801 &075.0015	Scales (crawlers) (including black scale, cottoncushion scale, hemlock scale, pine needle scale, and pine tortoise scale) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested. or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&209.4015		
&215.6015		
@ILAVAAA #3509801 &075.0015	Spider mites (including southern red mite and spruce spider mite) 1 tbls or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested. or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@ITAUADA	Tent caterpillars	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation in- formation.
@ITAXAAA #3509801 &075.0015	Tussock moths 0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pine (continued)</u>		
0ITBUATA 03509823 0085.0005	Western spruce budworm 0.85 g/4 in. tree circumference at breast height (85% P/T)	Injection treatment. Apply during bud swelling prior to bud burst. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridge needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
0ITBMBCA 03509823 0085.0005	Zimmerman pine moth 0.85 g/4 in. tree circumference at breast height (85% P/T)	Injection treatment. Apply during bud swelling prior to insect activity. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3411300 <u>Pittosporum</u>	
@IRACAAA #3411301 Aphids	0.5 tbls or Foliar application. 3 g 75% SC/S/gal water (75% SC/S)
#075.0015	or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
#209.4015	or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#215.6015 @IVABAAA #3411301 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3411302	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3411301 Scales (crawlers)	3 tbls or Foliar application. Apply 2 or 3 1.5 fl.oz times at 7 to 10 day intervals. 9.4% SC/L/ Additional applications may be need- gal water ed if plants become reinfested. (9.4% SC/L)
#209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#215.6015	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3509900 <u>Podocarpus</u>	
@IVABAAA Grasshoppers #3509901	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3509902	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG Scales (crawlers) #3509901	Foliar application.
S3401601	Refer to Abelia, Scales (crawlers), Foliar application for use and limitation information.
/3115900 <u>Poinsettia</u>	
@IVABAAA Grasshoppers #3115901	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3115902	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAWAAA Mealybugs (including citrus mealybug, longtailed mealybug, and solanum mealybug)	
#3115901	0.75 tbls or Foliar application. Apply 2 or 3 4.5 g 75% times at 7 to 10 day intervals. SC/S/gal Additional applications may be need- water ed if plants become reinfested.
#075.0015	(75% SC/S) or
#209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Poinsettia (continued)

Mealybugs (including citrus mealybug, longtailed mealybug, and solanum mealybug) (continued)

	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
9IRAAABG 93115901	Scales (crawlers) (including black scale and cottoncushion scale) 1 tbs or 6 g Foliar application. Apply 2 or 3 75% SC/S/gal times at 7 to 10 day intervals. water Additional applications may be need- (75% SC/S) ed if plants become reinfested.	
6075.0015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
6209.4015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
9IRABAAA	Whiteflies	Foliar application.
PIRAWAAA	Refer to Mealybugs (including citrus mealybug, longtailed mealybug, and solanum mealybug) for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3510100 <u>Poplar</u>		
@ITBKABA 93510101 &203.0019	Bagworm -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA Cankerworms		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITAUAEA 93510101	Eastern tent caterpillar	
&075.0015	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or	
&209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or	
&215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
@ITABAIA 93510101	Fall webworm	
&075.0015	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)	
PITBKABA		Refer to Bagworm for additional use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Poplar</u> (continued)		
0ITAUAGA Forest tent caterpillar		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
0IVABAAA Grasshoppers		Foliar application.
\$3510101		
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3510102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
0ITAXAIA Gypsy moth		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
0ITAXAIC Gypsy moth (larvae)		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
0IQAXAAA Lace bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
0IQAMARA Lygus bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
0ITBDAHA Poplar tentmaker		Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Poplar (continued)</u>		
@ITBDAIA \$3510101	Redhumped caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)
@ITBDAFA \$3510101	Saddled prominent	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)
@ITBEAFA \$3510101	Spiny elm caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)
@ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITAXAAA	Tussock moths (including whitemarked tussock moth)	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
@ITAUAFA	Western tent caterpillar	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
@ISBEAUA \$3510101	Willow sawfly	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3128400	<u>Primrose</u>		
@IRACAAA #3128401	Aphids	2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#209.4015			
#215.6015			
@IVABAAA #3128401	Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3128402		Soil application.	
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
@ILAVBEA #3128401	Twospotted spider mite	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
#215.6015			
/3141600	<u>Purple Passion Vine</u>		
@IRAWAJA #3141601	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Ad- ditional applications may be needed if plants become reinfested.
#209.4015			
#215.6015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Purple Passion Vine</u> (continued)		
@IVABAAA \$3141601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3141602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3510300	<u>Redbud</u>	
@ITBMATA \$3510323	Grape leafroller	0.85 g/4 in. Injection treatment. Apply during tree circum- late spring prior to larval activ- ference at ity. Each implant cartridge con- breast tains 0.85 gram actual acephate. height The number of implant cartridges (85% P/T) needed depends on the diameter of the tree. To de- termine the number of implant car- tridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Or- namental Plants (herbaceous, woody shrubs, trees and vines) for specif- ic information and instructions on implant cartridge application.
&085.0005		
/3411800	<u>Rhododendron</u>	
@INASCSA \$3411801	Black vine weevil	0.75 tbls or Foliar application. Use in conjunc- 4.5 g 75% tion with soil application. Begin SC/S/gal application in mid-June and make 3 water additional applications at 21 day (75% SC/S) intervals. or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&075.0015		
&209.4015		

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Rhododendron (continued)

Black vine weevil (continued)

	or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
93411802	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S)	Soil application. Apply to soil be- neath plants. Use in conjunction with foliar application. Begin ap- plication in mid-June and make 3 ad- ditional applications at 21 day in- tervals.
6075.0015	or 3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
6209.4015	or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		

0IVABAAA	Grasshoppers	
93411801		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
93411802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Rhododendron</u> (continued)		
@IQAXAAA #3411801	Lace bugs	
	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015 @INASDMJ #3411801	Obscure root weevil (adults)	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply in late spring as soon as feeding is noticed (usually about May). Repeat every 28 days through September. Mid-July through August are the peak feeding times.
&075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015 #3411802		
	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Apply in late spring as soon as feeding is noticed (usually about May). Repeat every 28 to 42 days through September. Mid-July through August are the peak feeding times.
&001.5004		

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3412000	<u>Rose</u>		
01RACAAA	Aphids		
3412001		0.5 tbls or 3 g 75% SC/S/gal water or 0.5 lb/100 gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
6075.0015			
6209.4015			
6215.6015			
6203.0019		-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
3412002		3.3 oz 1.5% G/9 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Apply 2 times in the spring (42 days apart) at the first sign of new growth and 1 additional application in the fall. Do not exceed 3 applications per year. A slight
6001.5004			

Use pattern continued on the next page.

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ACEPHATE

Site and PestDosages and Formulation(s) Tolerance, Use, LimitationsRose (continued)

Aphids (continued)

marginal top burn may result on leaves of sensitive varieties. On established roses, apply at first sign of new growth. Water thoroughly to carry the systemic control deep into the root zone. Do not make multiple applications in the spring on sandy soils as injury may occur. Do not apply to newly planted roses until they have become well established, or have been planted in the ground for 90 days.

@ITBCCNA
#3412001

Beet armyworm

0.75 tbls or Foliar application.
4.5 g 75%

SC/S/gal
water

&075.0015

(75% SC/S)

or

3 tbls or
1.5 fl.oz
9.4% SC/L/
gal water

&209.4015

(9.4% SC/L)

or

1.5 tbls or
0.75 fl.oz
15.6% SC/L/
gal water

&215.6015

(15.6% SC/L)

@ITBCBOA
#3412001

Corn earworm

3 tbls or Foliar application.
1.5 fl.oz

9.4% SC/L/
gal water

&209.4015

(9.4% SC/L)

or

1.5 tbls or
0.75 fl.oz
15.6% SC/L/
gal water

&215.6015

(15.6% SC/L)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Rose</u> (continued)	
@ITBCCOA Fall armyworm	Foliar application.
PITBCCNA	Refer to Beet armyworm for use and limitation information.
@IMOCAGA Flower thrips #3412001	0.75 tbls or Foliar application. Apply 2 or 3 4.5 g 75% times at 7 to 10 day intervals. SC/S/gal Additional applications may be need- water ed if plants become reinfested. (75% SC/S)
&075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015	
@IVABAAA Grasshoppers #3412001	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3412002	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@INBPAZA Japanese beetle #3412001	4 tbls or Foliar application. Repeat at 7 to 2 fl.oz 9.4% 10 day intervals as needed. SC/L/gal water (9.4% SC/L)
&209.4015	or 2 tbls or 1 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Rose (continued)

@ITBUAVA	Obliquebanded leafroller	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@INASDMJ \$3412001	Obscure root weevil (adults)	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply in late spring as soon as feeding damage is noticed (usually about May). Repeat every 28 days through September. Mid-July through August are the peak feeding times.
&075.0015		
@ITBUBCA \$3412001	Omnivorous leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBCCWA \$3412001	Rose budworm	
	3 tbls 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L)	Foliar application.
&209.4015		
@IOAHAMA	Rose midge	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@ISAIHA \$3412001	Rose stem sawfly	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBDAFA \$3412001	Saddled prominent	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		

ACEPHATE

Site and Pest

Rose (continued)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Rose (continued)</u>		
@ITAXADA #3412001	Whitemarked tussock moth	Foliar application.
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
@ITBCCQA	Yellowstriped armyworm	Foliar application.
PITBCCNA	Refer to Beet armyworm for use and limitation information.	
/3117100	<u>Salvia</u>	
@IRACAAA #3117102	Aphids	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
&001.5004	2.5 lb 1.5% G/100 sq.ft (1.5% G)	
@IMOCAGA #3117101	Flower thrips	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
	0.75 tbls or	
	4.5 g 75% SC/S/gal water	
	(75% SC/S)	
&075.0015	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Salvia</u> (continued)	
#IVABAAA Grasshoppers #3117101	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3117102	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#IRABAAA Whiteflies	Foliar application.
PIMOCAGA	Refer to Flower thrips for use and limitation information.
/3511100 <u>Sassafras</u>	
#IVABAAA Grasshoppers #3511101	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3511102	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
#ITAXAIA Gypsy moth #3511101	0.75 tbs or Foliar application.
#075.0015	4.5 g 75% SC/S/gal water (75% SC/S) or
#209.4015	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or
#215.6015	1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3117500 <u>Schefflera</u>	
@IRAWAJA \$3117501 Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
\$209.4015	(9.4% SC/L) or
\$215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
@IVABAAA \$3117501 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3117502	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3140800 <u>Shrimp Plant</u>	
@IRAHBBG \$3140801 Black scale (crawlers)	1 tbls or 6 g 75% SC/S/gal Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
\$075.0015	(75% SC/S)
@IRARACG \$3140801 Cottoncushion scale (crawlers)	1 tbls or 6 g 75% SC/S/gal Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
\$075.0015	(75% SC/S)
@IRAHBAG \$3140801 Hemispherical scale (crawlers)	1 tbls or 6 g 75% SC/S/gal Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
\$075.0015	(75% SC/S)

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3420900	<u>Shrub-Althea</u>		
@IVABAAA #3420901	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3420902			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3420901	Scales (crawlers)		Foliar application.
S3401601			Refer to Abelia, Scale (crawlers), Foliar application for use and limitation information.
/3511500	<u>Siberian Elm</u>		
@INAMDAA #3511501	Elm leaf beetle	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015			
@INAMDAC #3511501	Elm leaf beetle (larvae)	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
#209.4015			
#215.6015			
@IVABAAA #3511501	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Siberian Elm</u> (continued)		
Grasshoppers (continued)		
\$3511502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAAA \$3511501	Tussock moths (including whitemarked tussock moth)	
	0.75 tbls or Foliar application.	
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	
/3521100	<u>Silver Maple</u>	
@ITANACA \$3521101	Fall Cankerworm	
	0.75 tbls or Foliar application.	
	4.5 g 75%	
	SC/S/gal	
	water	
&075.0015	(75% SC/S)	
	or	
	3 tbls or	
	1.5 fl.oz	
	9.4% SC/L/	
	gal water	
&209.4015	(9.4% SC/L)	
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Silver Maple</u> (continued)		
@IVABAAA #3521101	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3521102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITANAVA #3521101	Spring cankerworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015 /3542600	<u>Slippery Elm</u>	
@ITAGAAA #3542601	Casebearers	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#075.0015		
#209.4015		
#215.6015		
@IVABAAA #3542601	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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Site and PestDosages and Formulation(s) Tolerance, Use, LimitationsSlippery Elm (continued)

Grasshoppers (continued)

#3542602

Soil application.

S3401602

Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

/3118400

Snapdragon

@IRACAAA

Aphids

#3118401

0.5 tbs or Foliar application.

3 g 75%

SC/S/gal

water

&075.0015

(75% SC/S)

or

2 tbs or

1 fl.oz

9.4% SC/L/

gal water

&209.4015

(9.4% SC/L)

or

1 tbs or

0.5 fl.oz

15.6% SC/L/

gal water

&215.6015

(15.6% SC/L)

#3118402

2.5 lb 1.5%

G/100 sq.ft

&001.5004

(1.5% G)

Preplant soil application. Work in-
to top 1 to 2 inches of soil. Plant
seed or set plants and water thor-
oughly.

@ITBCCNA

Beet armyworm

#3118401

0.75 tbs or Foliar application.

4.5 g 75%

SC/S/gal

water

&075.0015

(75% SC/S)

or

3 tbs or

1.5 fl.oz

9.4% SC/L/

gal water

&209.4015

(9.4% SC/L)

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Snapdragon (continued)

Beet armyworm (continued)

	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6215.6015		
0ITBCBOA	Corn earworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
0ITBCCOA	Fall armyworm	Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
0IMOCAGA 63118401	Flower thrips	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
6209.4015		
6215.6015		
0IVABAAA 63118401	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Snapdragon (continued)

Grasshoppers (continued)

\$3118402		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITBUAVA	Obliquebanded leafroller	
\$3118401	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@ITBCCWA	Rose budworm	
\$3118401	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application.
&209.4015		
@ITBCCLA	Southern armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.
@ITBCBNA	Tobacco budworm	
\$3118401	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITBCCQA	Yellowstriped armyworm	
		Foliar application.
PITBCCNA		Refer to Beet armyworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3413000 <u>Spirea</u>		
@IRACAAA \$3413001 Aphids	0.5 tbls or 3 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015	or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
&209.4015	or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
\$3413002	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application.
&001.5004		
@ITBKABA \$3413001 &203.0019 Bagworm	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA Cankerworms		Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Spirea</u> (continued)	
@ITABAIA Fall webworm	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IVABAAA \$3413001 Grasshoppers	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3413002	Soil application.
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC Gypsy moth (larvae)	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IQAXAAA Lace bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IQAMARA Lygus bugs	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@ITBUAVA \$3413001 Obliquebanded leafroller	Foliar application.
&209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Spirea</u> (continued)	
@ITBDAFA \$3413001	Saddled prominent 0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
6075.0015	
@ITAUAADA	Tent caterpillars
	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
/3511600	<u>Spruce</u>
@ITBKABA \$3511601 6203.0019	Bagworm
	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITANABA	Cankerworms
	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@ITABAIA	Fall webworm
	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.
@IVABAAA \$3511601	Grasshoppers
	Foliar application.
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Spruce</u> (continued)		
Grasshoppers (continued)		
\$3511602		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIA \$3511601	Gypsy moth	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water
&209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water
&215.6015		(15.6% SC/L)
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IQAXAAA	Lace bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IMAAAGA	Leafminers	Foliar application.
PITAXAIA		Refer to Gypsy moth for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Spruce (continued)</u>		
@IQAMARA	Lygus bugs	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ILAVAAA \$3511601	Spider mites (including southern red mite and spruce spider mite)	
	1 tbls or 6 g	Foliar application. Apply 2 or 3
	75% SC/S/gal	times at 7 to 10 day intervals.
	water	Additional applications may be need-
@075.0015	(75% SC/S)	ed if plants become reinfested.
	or	
	1.5 tbls or	
	0.75 fl.oz	
	15.6% SC/L/	
	gal water	
@215.6015	(15.6% SC/L)	
@ITAUADA	Tent caterpillars	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
/3413100	<u>Staghorn Sumac</u>	
@IVABAAA \$3413101	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3413102		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Staghorn Sumac (continued)</u>		
@ITBUAVA #3413101	Obliquebanded leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
	or	
&209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
	(9.4% SC/L)	
&215.6015	or	
	1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
	(15.6% SC/L)	
@ITBUBCA #3413101	Omnivorous leafroller	
	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
/3141400	<u>Statice</u>	
@IQAMARA #3141401	Lygus bugs	
	0.5 lb/100 gal water	Foliar application.
&075.0015	(75% SC/S)	
@IMOAAAA #3141401	Thrips	
	0.5 lb/100 gal water	Foliar application. Apply when pest first appears or at tight flower bud stage.
&075.0015	(75% SC/S)	
/3119100	<u>Strawflower</u>	
@IMOAAAA #3119101	Thrips	
	0.5 lb/100 gal water	Foliar application. Apply when pest first appears or at tight flower bud stage.
&075.0015	(75% SC/S)	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3427500	<u>Sumac</u>		
@ITBDABA #3427501	Walnut caterpillar	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
/3421500	<u>Sweet Bay</u>		
@IRAHBBG #3421501	Black scale (crawlers)	1 tbs or 6 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015			
@IRARACG #3421501	Cottonycushion scale (crawlers)	1 tbs or 6 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015			
@IRAXAAA #3421501	Psyllids	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			
/3511800	<u>Sweetgum</u>		
@ITBKABA #3511801	Bagworm	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
&209.4015			
&215.6015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sweetgum (continued)</u>		
<u>Bagworm (continued)</u>		
&203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAHBBG \$3511801	Black scale (crawlers)	
	1 tbls or 6 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S)	
@ITANABA \$3511801 &203.0019	Cankerworms	
	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRARACG	Cottonycushion scale (crawlers)	
		Foliar application.
PIRAHBBG		Refer to Black scale (crawlers) for use and limitation information.
@ITABAIA	Fall webworm	
		Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sweetgum (continued)</u>		
@IVABAAA #3511801	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3511802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@IRAHBAG	Hemispherical scale (crawlers)	Foliar application.
PIRAHBBG		Refer to Black scale (crawlers) for use and limitation information.
@IRAHBJG	Indian wax scale (crawlers)	Foliar application.
PIRAHBBG		Refer to Black scale (crawlers) for use and limitation information.
@IQAXAAA	Lace bugs	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@IQAMARA	Lygus bugs	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.
@ITBUAVA #3511801	Obliquebanded leafroller	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015		

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Sweetgum</u> (continued)	
@ITBUBCA \$3511801	Omnivorous leafroller 0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015	
@ITBDAIA \$3511801	Redhumped caterpillar 0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015	
@ITBMDYA \$3511801	Sweetgum leaftier 0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
&075.0015	
@ITAUADA	Tent caterpillars Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
/3511900	<u>Sycamore</u>
@IRACAAA \$3511901	Aphids 0.5 tbs or Foliar application. 3 g 75% SC/S/gal water (75% SC/S)
&075.0015	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sycamore</u> (continued)		
Aphids (continued)		
#3511923	0.85 g/4 in. tree circumference at breast height (85% P/T)	Injection treatment. Apply when wingless forms first appear. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
#085.0005		
#ITBKABA #3511901	Bagworm	
#075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or	Foliar application.
#209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or	
#215.6015	1.5 tbls or 0.75 fl.oz 15.6% SC/L/gal water (15.6% SC/L)	
#203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sycamore (continued)</u>		
@ITANABA #3511901 &203.0019	Cankerworms -- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITAGAAA #3511901 &075.0015 &209.4015 &215.6015	Casebearers 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
@ITABAIA #3511901 &075.0015	Fall webworm 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Sycamore (continued)

Fall webworm (continued)

6203.0019	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
63511923	0.85 g/4 in. tree circumference at breast height	Injection treatment. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
6085.0005	(85% P/T)	
0IVABAAA 63511901	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
63511902		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
0ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITANABA		Refer to Cankerworms for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sycamore</u> (continued)		
@IQAXAAA #3511901 Lace bugs	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)	
&075.0015	or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015	-- (3% PrL)	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
&203.0019	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. Do not apply more than 3 times per year.
#3511902 &001.5004		
@IQAMARA Lygus bugs	Foliar application.	
PITANABA	Refer to Cankerworms for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Sycamore (continued)</u>		
@ITBUAVA #3511901	Obliquebanded leafroller 0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
@ITBUBCA #3511901	Omnivorous leafroller 0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
@IZZCNA #3511901	Sycamore leaftier 0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S)	
@ITAUADA	Tent caterpillars	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.	
@ITAXAAA #3511901	Tussock moths (including whitemarked tussock moth) 0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3120200 <u>Transvaal Daisy</u>	
@ITBCCSA Cabbage looper #3120201	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
#075.0015 @ITANAWA Omnivorous looper #3120201	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water (75% SC/S)
/3120500 <u>Tulips</u>	
@IRACAAA Aphids #3120501	2 tbls or Foliar application. 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#209.4015	
#215.6015	
#3120523	
#085.0005	0.85 g/4 in. Injection treatment. Apply when tree circum- wingless forms first appear. Each ference at implant cartridge contains 0.85 gram breast actual acephate. The number of im- height plant cartridges needed depends on (85% P/T) the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and di- vide by 4. Refer to general warn- ings under Ornamental Plants (herba- ceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Tulips</u> (continued)		
©IVABAAA #3120501	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3120502		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
/3413700	<u>Viburnum</u>	
©IRACAAA #3413701	Aphids	0.5 tbls or Foliar application. 3 g 75% SC/S/gal water (75% SC/S) or 2 tbls or 1 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&075.0015		
&209.4015		
&215.6015		
#3413702		2.5 lb 1.5% Soil application. Apply evenly over G/100 sq.ft. the root zone of the plants from the (1.5% G) base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after appli- cation.
&001.5004		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Viburnum</u> (continued)		
@ITBKABA #3413701 &203.0019	Bagworm	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@INASCSA #3413701	Black vine weevil	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L) Foliar application. Use in conjunction with soil application. Begin application in mid-June and make 3 additional applications at 21 day intervals.
&209.4015		
&215.6015		
#3413702		
&209.4015		
&215.6015		
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Viburnum</u> (continued)		
①ITABAIA Fall webworm		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
①IVABAAA \$3413701 Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
\$3413702		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
①ITAXAIC Gypsy moth (larvae)		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
①IQAXAAA Lace bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
①IQAMARA Lygus bugs		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
①INASDMJ \$3413701 Obscure root weevil (adults)	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply in late spring as soon as feeding damage is noticed (usually about May). Repeat every 28 days through September. Mid-July through August are the peak feeding times.
\$075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Viburnum</u> (continued)		
@IRAAAEA #3413701	Planthoppers	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITAUADA #3413701	Tent caterpillars	
		Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ILAVBEA #3413701	Twospotted spider mite	
	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015		
@IRABAAA #3413701	Whiteflies	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		
@IRABAAA #3413701	Whiteflies	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015		
@IRABAAA #3413701	Whiteflies	
	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&215.6015		

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3512200	<u>Walnut</u>		
@IRACAAA #3512223	Aphids	0.85 g/4 in. tree circum- ference at breast height (85% P/T)	Injection treatment. Apply when wingless forms first appear. Each implant cartridge contains 0.85 gram actual acephate. The number of implant cartridges needed depends on the diameter breast height of the tree. To determine the number of implant cartridges needed, multiply the trunk diameter by 3.14 and divide by 4. Refer to general warnings under Ornamental Plants (herbaceous, woody shrubs, trees and vines) for specific information and instructions on implant cartridge application.
&085.0005			
/3127800	<u>Wandering Jew</u>		
@IRAWAJA #3127801	Citrus mealybug	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&209.4015			
&215.6015			
@IVABAAA #3127801	Grasshoppers		Foliar application.
S3401601			Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3127802			Soil application.
S3401602			Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3535500	<u>Wild Cherry</u>		
#IVABAAA \$3535501	Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
\$3535502			Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
#ITAXAAA \$3535501	Tussock moths (including whitemarked tussock moth)	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
\$075.0015		(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
\$209.4015		(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
\$215.6015		(15.6% SC/L)	
/3512800	<u>Willow</u>		
#IRACAAA \$3512801	Aphids	0.5 tbls or 3 g 75% SC/S/gal water	Foliar application.
\$075.0015		(75% SC/S)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Willow</u> (continued)	
#ITBKABA #3512801 Bagworm	0.75 tbls or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015	(75% SC/S) or
&209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)
&215.6015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&203.0019	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
#ITANABA #3512801 &203.0019 Cankerworms	-- (3% PrL) Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Willow</u> (continued)		
@ITAUAEA #3512801	Eastern tent caterpillar 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application.
6075.0015		
6209.4015		
6215.6015		
@ITABAIA #3512801	Fall webworm 0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
6075.0015		
PITANABA	Refer to Cankerworms for additional use and limitation information.	
@ITAUAGA Forest tent caterpillar	Foliar application.	
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	
@IVABAAA #3512801	Grasshoppers Foliar application.	
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3512802	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Willow</u> (continued)	
●ITAXAIA Gypsy moth	Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.
●ITAXAIC Gypsy moth (larvae)	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
●IQAXAAA Lace bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
●INAMAAC Leaf beetles (larvae) #3512802 4001.5004	2.5 lb 1.5% Soil application. Apply evenly over G/100 sq.ft the root zone of the plants from the (1.5% G) base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after appli- cation.
●IQAHARA Lygus bugs	Foliar application.
PITANABA	Refer to Cankerworms for use and limitation information.
●ITBDAHA Poplar tentmaker	Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.
●IRAXAAA Psyllids	Foliar application.
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Willow (continued)</u>		
@ITBDAIA #3512801	Redhumped caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@IRAAABG #3512801	Scales (crawlers) (including black scale and cottoncushion scale) 1 tbls or 6 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015		
&209.4015		
&215.6015		
@ITBEAFA #3512801	Spiny elm caterpillar 0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015		
@ITAUAADA	Tent caterpillars	Foliar application.
PITBKABA	Refer to Bagworm for use and limitation information.	
@ITAXAAA	Tussock moths (including whitemarked tussock moth) Foliar application.	
PITAUAEA	Refer to Eastern tent caterpillar for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Willow (continued)</u>		
@ITBDABA #3512801	Walnut caterpillar	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)
@ITAUAFA	Western tent caterpillar	Foliar application.
PITAUAEA		Refer to Eastern tent caterpillar for use and limitation information.
@INAMDKA #3512801	Willow leaf beetles	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)
@INAMDKC #3512801	Willow leaf beetles (larvae)	3 tbs or 1.5 Foliar application. fl.oz 9.4% SC/L/gal water
&209.4015		(9.4% SC/L) or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
&215.6015		
#3512802		2.5 lb 1.5% Soil application. Apply evenly over G/100 sq.ft the root zone of the plants from the (1.5% G) base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil. In lawn areas, water thor- oughly after application.
#001.5004		
@ISBEAUA #3512801	Willow sawfly	0.75 tbs or Foliar application. 4.5 g 75% SC/S/gal water
&075.0015		(75% SC/S)

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3422800	<u>Wisteria</u>	
@IRAWAJA #3422801	Citrus mealybug	3 tbs or 1.5 fl.oz 9.4% SC/L/gal water Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6209.4015		(9.4% SC/L) or
		1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015		
@IVABAAA #3422801	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3422802		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAWAMA	Longtailed mealybug	Foliar application.
PIRAWAJA		Refer to Citrus mealybug for use and limitation information.
@IRAAAABG #3422801	Scales (crawlers)	3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
6209.4015		(9.4% SC/L) or
		1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
6215.6015		

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<u>Site and Pest</u>		<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>	
/3121100	<u>Yarrow</u>		
@IQAMARA \$3121101	Lygus bugs	0.5 lb/100 gal water (75% SC/S)	Foliar application.
&075.0015			
@IMOAAAA \$3121101	Thrips	0.5 lb/100 gal water (75% SC/S)	Foliar application. Apply when pest first appears or at tight flower bud stage.
&075.0015			
/3438800	<u>Yaupon</u>		
@IVABAAA \$3438801	Grasshoppers		Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
\$3438802		Soil application.	
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
@IRAHBJG \$3438801	Indian wax scale (crawlers)	1 tbs or 6 g 75% SC/S/gal water (75% SC/S)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015			
@IMAAAGA \$3438801	Leafminers	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
&075.0015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Yaupon (continued)

Leafminers (continued)

\$3438802	2.5 lb 1.5% G/100 sq.ft	Soil application. Apply evenly over the root zone of the plants from the base to the drip line on all sides of the plant. In cultivated areas, work into the top 1 to 2 inches of soil and water thoroughly. In lawn areas, water thoroughly after application. For control of birch leaf-miner, apply in the early spring when leaves are unfolding (leaf puncture stage) or at the earliest sign of leaf damage. Repeat in 28 to 42 days for second generation.
&001.5004	(1.5% G)	

@IRAXAAA
\$3438801

Psyllids

	0.75 tbls or 4.5 g 75% SC/S/gal water	Foliar application.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

@ILAVAAA
\$3438801

Spider mites (including southern red mite)

	1 tbls or 6 g 75% SC/S/gal water	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
&075.0015	(75% SC/S) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Yaupon</u> (continued)		
@IRAKAZG Tea scale (crawlers)	Foliar application.	
PIRAHBJG Refer to Indian wax scale (crawlers) for use and limitation information.		
/3513000 <u>Yew</u>		
@ITBKABA Bagworm	-- (3% PrL)	
#3513001 6203.0019	Foliar application. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.	
@INASCSA Black vine weevil #3513001	0.75 tbsl or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbsl or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbsl or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Use in conjunction with soil application. Begin application in mid-June and make 3 additional applications at 21 day intervals.
6075.0015		
6209.4015		
6215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Yew (continued)

Black vine weevil (continued)

#3513002	0.75 tbls or 4.5 g 75% SC/S/gal water	Soil application. Apply to soil beneath plants. Use in conjunction with foliar application. Begin application in mid-June and make 3 additional applications at 21 day intervals.
&075.0015	(75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water	
&209.4015	(9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water	
&215.6015	(15.6% SC/L)	
@ITANABA	Cankerworms	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@ITABAIA	Fall webworm	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.
@IVABAAA #3513001	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3513002		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@ITAXAIC	Gypsy moth (larvae)	Foliar application.
PITBKABA		Refer to Bagworm for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Yew</u> (continued)		
9IQAXAAA Lace bugs	Foliar application.	
9ITBKABA	Refer to Bagworm for use and limitation information.	
9IQAMARA Lygus bugs	Foliar application.	
9ITBKABA	Refer to Bagworm for use and limitation information.	
9IRAWAAA 93513001	Mealybugs (including longtailed mealybug and taxus mealybug)	
9075.0015	0.75 tbls or 4.5 g 75% SC/S/gal water (75% SC/S) or 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
9209.4015	0.75 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
9215.6015		
9IRAAABG 93513001	Scales (crawlers)	
9209.4015	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be needed if plants become reinfested.
9215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Yew</u> (continued)		
@ITAUADA Tent caterpillars	Foliar application.	
PITBKABA	Refer to Bagworm for use and limitation information.	
/3121200 <u>Yucca (Herbaceous)</u>		
@IMOCAGA Flower thrips #3121201	3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	Foliar application. Apply 2 or 3 times at 7 to 10 day intervals. Additional applications may be need- ed if plants become reinfested.
&209.4015	or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
&215.6015		
@IVABAAA Grasshoppers #3121201	Foliar application.	
S3401601	Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.	
#3121202	Soil application.	
S3401602	Refer to Abelia, Grasshoppers, Soil application for use and limitation information.	
@IRAAABG Scales (crawlers)	Foliar application.	
PIMOCAGA	Refer to Flower thrips for use and limitation information.	
/3414300 <u>Yucca (Woody)</u>		
@IMOCAGA Flower thrips #3414301	Foliar application.	
S3121201	Refer to Yucca (Herbaceous), Flower thrips, Foliar application for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Yucca (Woody) (continued)</u>		
@IVABAAA #3414301	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3414302		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.
@IRAAABG #3414301	Scales (crawlers)	Foliar application.
S3121201		Refer to Yucca (Herbaceous), Flower thrips, Foliar application for use and limitation information.
/3121300	<u>Zinnia</u>	
@IHOCAGA #3121301	Flower thrips	0.75 tbls or Foliar application. Apply 2 or 3 times at 7 to 10 day intervals.
		4.5 g 75% SC/S/gal Additional applications may be needed if plants become reinfested.
#075.0015		water (75% SC/S)
		or
		3 tbls or
		1.5 fl.oz
		9.4% SC/L/
		gal water
#209.4015		(9.4% SC/L)
		or
		1.5 tbls or
		0.75 fl.oz
		15.6% SC/L/
		gal water
#215.6015		(15.6% SC/L)
@IVABAAA #3121301	Grasshoppers	Foliar application.
S3401601		Refer to Abelia, Grasshoppers, Foliar application for use and limitation information.
#3121302		Soil application.
S3401602		Refer to Abelia, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Zinnia</u> (continued)		
#IQAXAAA #3121301	Lace bugs	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		
#IRAFAAA #3121302	Leafhoppers	
	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly.
#001.5004		
#IMAAAGA #3121301	Leafminers	
	0.75 tbs or 4.5 g 75% SC/S/gal water (75% SC/S)	Foliar application.
#075.0015	or 3 tbs or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L)	
#209.4015	or 1.5 tbs or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Zinnia (continued)</u>		
<u>Leafminers (continued)</u>		
#3121302 #001.5004	2.5 lb 1.5% G/100 sq.ft (1.5% G)	Preplant soil application. Work in- to top 1 to 2 inches of soil. Plant seed or set plants and water thor- oughly. For control of birch leaf- miner, apply in the early spring when leaves are unfolding (leaf puncture stage) or at the earliest sign of leaf damage. Repeat appli- cation in 28 to 42 days for second generation.
@IRABAAA	Whiteflies	Foliar application.
PIMOCAGA		Refer to Flower thrips for use and limitation in- formation.
:	<u>(Lawns and Turf)</u>	
/3301600	<u>Bentgrass</u>	
@IVABAAA #3301601	Grasshoppers	
#209.4015	2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Use in conjunc- tion with soil application.
#215.6015		
#3301602	2 tbls or 1 fl.oz 9.4% SC/L/gal water (9.4% SC/L) or 1 tbls or 0.5 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Soil application. Use in conjunc- tion with foliar application.
#209.4015		
#215.6015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Bentgrass</u> (continued)		
@IRAFAAA #3301601 &209.4015 &215.6015	Leafhoppers 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 6 gallons of finished spray per 1,000 square feet.
@ITBMABA PIRAFAAA /3301700	Sod webworms <u>Bermudagrass</u>	Foliar application. Refer to Leafhoppers for use and limitation in- formation.
@ITBCCOA #3301701 &209.4015 &215.6015	Fall armyworm 3 tbls or 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)	Foliar application. Apply 6 gallons of finished spray per 1,000 square feet.
@IVABAAA #3301701 S3301601 #3301702 S3301602	Grasshoppers 	Foliar application. Refer to Bentgrass, Grasshoppers, Foliar applica- tion for use and limitation information. Soil application. Refer to Bentgrass, Grasshoppers, Soil application for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
●IRAFAAA Leafhoppers	Foliar application.
PITBCCOA	Refer to Fall armyworm for use and limitation information.
●ITBMABA Sod webworms	Foliar application.
PITBCCOA	Refer to Fall armyworm for use and limitation information.
/3301900 <u>Bluegrass</u>	
●IVABAAA Grasshoppers #3301901	Foliar application.
S3301601	Refer to Bentgrass, Grasshoppers, Foliar application for use and limitation information.
#3301902	Soil application.
S3301602	Refer to Bentgrass, Grasshoppers, Soil application for use and limitation information.
●IRACDNA Greenbug #3301901	3 tbls or Foliar application. Apply 6 gallons of finished spray per 1,000 square feet. 1.5 fl.oz 9.4% SC/L/ gal water (9.4% SC/L) or 1.5 tbls or 0.75 fl.oz 15.6% SC/L/ gal water (15.6% SC/L)
#209.4015	
#215.6015	
●IRAFAAA Leafhoppers	Foliar application.
PIRACDNA	Refer to Greenbug for use and limitation information.
●ITBMABA Sod webworms	Foliar application.
PIRACDNA	Refer to Greenbug for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
/3303100 #IVABAAA #3303101 S3301601 #3303102 S3301602 #IRAFAAA #3303101 S3301601	<u>Fescue</u> Grasshoppers Foliar application. Refer to Bentgrass, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Bentgrass, Grasshoppers, Soil application for use and limitation information. Leafhoppers Foliar application. Refer to Bentgrass, Leafhoppers, Foliar application for use and limitation information.
<u>Fire Ant Mounds</u> (in bermudagrass, centipedegrass, bahiagrass, St. Augustinegrass and bare ground)	
/3305000 #IVABAAA #3305001 S3301601 #3305002 S3301602 #IRAFAAA #3305001 S3301601	<u>St. Augustinegrass</u> Grasshoppers Foliar application. Refer to Bentgrass, Grasshoppers, Foliar application for use and limitation information. Soil application. Refer to Bentgrass, Grasshoppers, Soil application for use and limitation information. Leafhoppers Foliar application. Refer to Bentgrass, Leafhoppers, Foliar application for use and limitation information.

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ACEPHATE

Site and Pest

Dosages and Tolerance, Use, Limitations Formulation(s)

: (Ornamental and Forest Greenhouse Plants)

General Warnings and Limitations: Workers exposed to treated plant surfaces prior to 24 hours following application of acephate must wear chemical-resistant gloves. For greenhouse application, apply at the end of work day. Shut off all outside exhaust fans and close windows, doors, and ventilation. If greenhouse cannot be closed tightly, use higher dosage.

/3147100

Airplane Plant

@IRACAAA
#3147110
&203.0019

Aphids

--
(3% PrL)

Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

@IRAWAAA

Mealybugs

Foliar application to greenhouse grown plants.

PIRACAAA

Refer to Aphids for use and limitation information.

@IRAAABA

Scales

Foliar application to greenhouse grown plants.

PIRACAAA

Refer to Aphids for use and limitation information.

@ILAVAAA

Spider mites

Foliar application to greenhouse grown plants.

PIRACAAA

Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Airplane Plant</u> (continued)		
©IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3101600 <u>Aloe</u>		
©IRACAAA Aphids		
#3101610	--	
&203.0019	(3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©IRAWAAA Nealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and</u> <u>Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Aloe</u> (continued)		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3102100 <u>Anthurium</u>		
@IRACAAA Aphids #3102110	0.25 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&075.0015		
@IRAWAAA Mealybugs #3102110	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015		
@IRAAABG Scales (crawlers) #3102110	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Repeat at 14 day intervals as needed.
&075.0015		
@IMOAAAA Thrips #3102110	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&075.0015		
@IRABAAA Whiteflies #3102110	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015		

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Site and Pest	Dosages and Tolerance, Use, Limitations Formulation(s)
/3103400 <u>Begonia</u>	
@IRACAAA #3103410 &203.0019 Aphids	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRAAABA Scales	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IMOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>	
/3103800	<u>Bird-of-Paradise</u>		
0IRACAAA #3103810 #203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
0IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IMOAAFA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3104000	<u>Bloodleaf</u>		
©IRACAAA #3104010 &203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3901300	<u>Boston Fern</u>		
•IRACAAA #3901310 #203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
•IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
•IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
•ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
•IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
•IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3104600	<u>Cacti</u>		
0IRACAAA #3104610	Aphids	0.25 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&075.0015			
&203.0019		-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
0IRAWAAA #3104610	Mealybugs	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015			
&203.0019		-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Cacti (continued)</u>		
@IRAAABA \$3104610 &203.0019	Scales -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAAABG \$3104610 &075.0015	Scales (crawlers) 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Repeat at 14 day intervals.
@ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PIRAAABA	Refer to Scales for use and limitation information.	
@IMOAAAA \$3104610 &075.0015	Thrips 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Cacti</u> (continued)	
•IRABAAA Whiteflies	Foliar application.
PIRAWAAA	Refer to Mealybugs for use and limitation information.
/3105000 <u>Calendula</u>	
•IRACAAA Aphids \$3105010 &203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
•ITBCCSA Cabbage looper	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
•IRAWAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
•ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Calendula</u> (continued)		
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
/3105700 <u>Carnation</u>		Do not apply 3 percent pressurized liquid more often than once every 28 days.
@IRACAAA Aphids		
83105710	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
6075.0015		
6203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Carnation</u> (continued)		
@ITBCCSA #3105710 &203.0019	Cabbage looper	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IHAAAGA	Leafminers	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
@IHAAAEA	Leafrollers	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
@IRAWAAA	Mealybugs	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
@IRAAABA	Scales	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
@ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Carnation (continued)</u>		
@IMOAAAA #3105710 #075.0015	Thrips 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Apply when pest first appears or at the tight flower bud stage.
PITBCCSA		Refer to Cabbage looper for additional use and limitation information.
@IRABAAA	Whiteflies	Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
/3147000	<u>Centaurea gymnocarpa</u>	
@IRACAAA #3147010 #203.0019	Aphids -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Centaurea cyanocarpa</u> (continued)		
©ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IMOAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3144400 <u>Chicken Gizzard</u>		
©IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©3144410	(3% PrL)	
©203.0019		
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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Site and PestDosages and Tolerance, Use, Limitations
Formulation(s)Chicken Gizzard (continued)

©IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
©IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
/3123100	<u>Christmas Cactus</u>		
©IRACAAA	Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©3123110		(3% PrL)	
©203.0019			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Christmas Cactus (continued)

•IRAVAAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
•IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
•ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
•IMOAAAA	Thrips	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
•IRABAAA	Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3106500 <u>Chrysanthemum</u>		Do not apply 3 percent pressurized liquid more often than once every 28 days. Phytotoxicity has occurred on the following chrysanthemum varieties: albatross, bonnie jean, dixie, garland gem, iceberg, pride, showoff, statesmen, tally ho, westward ho, and wild honey. Before treating large chrysanthemum plantings, spray only a few plants and observe 14 days for varietal phytotoxicity.
#IRACAA #3106510 &2075.0015	Aphids 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
#ITBCCSA #3106510 &203.0019	Cabbage looper -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Chrysanthemum</u> (continued)		
©IHAAAGA Leafminers		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
©IMAAAEA Leafrollers		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
©ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
©IMOAAAA #3106510 #075.0015	Thrips 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Apply when pest first appears or at the tight flower bud stage.
PITBCCSA		Refer to Cabbage looper for additional use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Chrysanthemum</u> (continued)		
0IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PITBCCSA		Refer to Cabbage looper for use and limitation information.
/3107100 <u>Coleus</u>		
0IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
03107110	(3% PrL)	
0203.0019		
0IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
0IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
0ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Coleus</u> (continued)		
©IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3107200 <u>Columbine</u>		
©IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
#3107210	(3% PrL)	
&203.0019		
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
<u>Columbine (continued)</u>	
@ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IMOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
/3404700 <u>Crotons</u>	
@IRACAAA Aphids #3404710 &203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u>	<u>Formulation(s)</u>
<u>Crotons</u> (continued)		
●IRAAABA Scales	Foliar application to greenhouse grown plants.	
PIRACAAA	Refer to Aphids for use and limitation information.	
●ILAVAAA Spider mites	Foliar application to greenhouse grown plants.	
PIRACAAA	Refer to Aphids for use and limitation information.	
●IMOAAAA Thrips	Foliar application to greenhouse grown plants.	
PIRACAAA	Refer to Aphids for use and limitation information.	
●IRABAAA Whiteflies	Foliar application to greenhouse grown plants.	
PIRACAAA	Refer to Aphids for use and limitation information.	
/3436000 <u>Crown-of-Thorns</u>		
●IRACAAA Aphids	--	
●3436010	(3% PrL)	
●203.0019		Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Crown-of-Thorns (continued)

©IRAWAAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IMOAAAA	Thrips	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRABAAA	Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3144500	<u>Devils Ivy</u>	
©IRACAAA	Aphids	
©3144510		--
©203.0019		(3% PrL)
		Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Devils Ivy (continued)

Aphids (continued)

height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

●IRAWAAA	Mealybugs	
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Foliar application to greenhouse grown plants.

PIRACAAA		
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Refer to Aphids for use and limitation information.

●IRAAABA	Scales	
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Foliar application to greenhouse grown plants.

PIRACAAA		
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Refer to Aphids for use and limitation information.

●ILAVAAA	Spider mites	
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Foliar application to greenhouse grown plants.

PIRACAAA		
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Refer to Aphids for use and limitation information.

●IMOAAAA	Thrips	
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Foliar application to greenhouse grown plants.

PIRACAAA		
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Refer to Aphids for use and limitation information.

●IRABAAA	Whiteflies	
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Foliar application to greenhouse grown plants.

PIRACAAA		
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Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>	
/3108900	<u>Dieffenbachia</u>		
©IRACAAA #3108910 &203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
©IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
©ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
©IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
©IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3405300 <u>Euonymus</u>		
@IRACAAA Aphids #3405310 &203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IHAAAA Leafrollers		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IHAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Euonymus</u> (continued)		
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3499900 <u>Feltbrush</u>		
@IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
\$3499910 (3% PrL)		
&203.0019		
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Feltbrush</u> (continued)		
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3110600 <u>Garden Balsam</u>		
@IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@3110610	(3% PrL)	
@203.0019		
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Garden Balsam</u> (continued)		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3406300 <u>Gardenia</u>		
@IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@3406310	(3% PrL)	
@203.0019		
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Gardenia</u> (continued)	
●IRAAABA Scales	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
●ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
●IMOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
●IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
/3110800 <u>Geranium</u>	
●IRACAAA Aphids ●3110810 ●203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Geranium</u> (continued)		
●ITBCCSA Cabbage looper		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●INAAAEA Leafrollers		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
●IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>	
/3142400	<u>German Ivy</u>		
•IRACAAA #3142410 #203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
•ITBCCSA	Cabbage looper		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
•IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
•IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
•ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
•IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>German Ivy</u> (continued)		
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3418300 <u>Grape-Ivy</u>		
@IRACAAA Aphids		
93418310	--	
6203.0019	(3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITBCCSA Cabbage looper		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Grape-Ivy (continued)</u>		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IMOAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
/3112700 <u>Jade Plant</u>		
@IRAWAAA Mealybugs	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@3112710	(3% PrL)	
@203.0019		
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRAWAAA	Refer to Mealybugs for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Jade Plant (continued)</u>		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRAWAAA		Refer to Mealybugs for use and limitation information.
/3114100	<u>Moses-in-the-Cradle</u>	
@IRACAAA #3114110 &203.0019	Aphids -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>
<u>Moses-in-the-Cradle</u> (continued)	
*IMOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
*IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
/3146800 <u>Nightblooming Cereus</u>	
*IRACAAA Aphids #3146810 &203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
*IRAAAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
*IRAAABA Scales	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Nightblooming Cereus</u> (continued)		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3114700 <u>Orchids</u>		
@IRACAAA Aphids		
\$3114710	0.25 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&075.0015		
&203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Orchids</u> (continued)		
@ITBCCSA #3114710 &203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA #3114710 &075.0015	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
PITBCCSA	Refer to Cabbage looper for additional use and limitation information.	
@IRAAAABA Scales	Foliar application to greenhouse grown plants.	
PITBCCSA	Refer to Cabbage looper for use and limitation information.	
@IRAAAABG #3114710 &075.0015	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
@ILAVAAA Spider mites	Foliar application to greenhouse grown plants.	
PITBCCSA	Refer to Cabbage looper for use and limitation information.	
@IMOAAAA #3114710 &075.0015	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
PITBCCSA	Refer to Cabbage looper for additional use and limitation information.	

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Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
<u>Orchids</u> (continued)		
@IRABAAA #3114710	Whiteflies	0.5 lb/100 gal water (75% SC/S) Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015		
PITBCCSA		Refer to Cabbage looper for additional use and limitation information.
/3100400	<u>Ornamental Foliage Plants</u>	Phytotoxicity has occurred on the following foliage plants: <u>Blechnum</u> <u>gibbum</u> , <u>Cissus antartica</u> , <u>Ficus</u> <u>tranquilaris</u> , <u>Fittonia vershafetti</u> , prayer plant (<u>Maranta leuconeura</u> <u>kerchoveana</u>), <u>Pachystachya lutea</u> , <u>Plecanthus australis</u> , <u>Polypodium</u> <u>aureus</u> , <u>Polystichum</u> , <u>Pteris endi-</u> <u>formis</u> , and piggyback plant (<u>Tolmiea</u> <u>menziesii</u>). Before treating large plantings, spray only a few plants and observe 14 days for varietal toxicity. The addition of a wetting agent may be needed on difficult to wet foliage.
@IRACAAA #3100410	Aphids	0.25 lb/100 gal water (75% SC/S) Foliar application to greenhouse grown plants.
&075.0015		
@IRAWAAA #3100410	Mealybugs	0.5 lb/100 gal water (75% SC/S) Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015		
@IRAAABG #3100410	Scales (crawlers)	0.5 lb/100 gal water (75% SC/S) Foliar application to greenhouse grown plants. Repeat at 14 day intervals as needed.
&075.0015		
@IMOAAAA #3100410	Thrips	0.5 lb/100 gal water (75% SC/S) Foliar application to greenhouse grown plants.
&075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Ornamental Foliage Plants (continued)</u>		
0IRABAA 33100410 6075.0015 /3114900	Whiteflies 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
0IRACAA 33114910 203.0019	Pansies Aphids -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
0IRAWAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAA		Refer to Aphids for use and limitation information.
0IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAA		Refer to Aphids for use and limitation information.
0ILAVAA	Spider mites	Foliar application to greenhouse grown plants.
PIRACAA		Refer to Aphids for use and limitation information.
0IMOAAA	Thrips	Foliar application to greenhouse grown plants.
PIRACAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pansies</u> (continued)		
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3115200 <u>Peperomia</u>		
©IRACAAA Aphids	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©3115210	(3% PrL)	
©203.0019		
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
©ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Peperomia</u> (continued)		
*IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
*IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3144600 <u>Pepper (Ornamental)</u>		
*IRACAAA Aphids #3144610 #203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
*IMAAAGA Leafminers		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
*IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and</u> <u>Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Pepper (Ornamental)</u> (continued)		
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
3ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
/3115500 <u>Philodendron</u>		
@IRACAAA Aphids		
\$3115510		
&203.0019		
-- (3% PrL)		Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Philodendron</u> (continued)		
●IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
●IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
●ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
●IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
●IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
/3115900 <u>Poinsettia</u>		
●IRACAAA Aphids		
●3115910	0.25 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
&075.0015		
&203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period

Use pattern continued on the next page.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Poinsettia (continued)

Aphids (continued)

of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.

@IRAWAAA #3115910	Mealybugs	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. A repeat application may be made after 14 days if needed.
&075.0015			
&203.0019		-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAAABA #3115910	Scales	--	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
&203.0019		(3% PrL)	
@IRAAABG #3115910	Scales (crawlers)	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Repeat at 14 day intervals.
&075.0015			

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Poinsettia</u> (continued)		
©ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRAAABA	Refer to Scales for use and limitation information.	
©IMOAAAA #3115910 #075.0015	Thrips 0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRAWAAA	Refer to Mealybugs for use and limitation information.	
/3144700	<u>Polka Dot Plant</u>	
©IRACAAA #3144710 #203.0019	Aphids -- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	

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<u>Site and Pest</u>	<u>Dosages and</u> <u>Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Polka Dot Plant</u> (continued)		
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3412000 <u>Rose</u>		
@IRACAAA Aphids #3412010	0.5 lb/100 gal water (75% SC/S)	Foliar application to greenhouse grown plants.
#075.0015		
@IMAAAEA Leafrollers #3412010	0.5-0.75 lb/ 100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Use the higher dosage when large larvae are present.
#075.0015		
@IMOAAAA Thrips #3412010	0.5-0.75 lb/ 100 gal water (75% SC/S)	Foliar application to greenhouse grown plants. Apply when pest first appears or at the tight flower bud stage.
#075.0015		

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3117200 <u>Sansevieria</u> @IRACAAA Aphids #3117210 &203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRAAABA Scales	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@INOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>		<u>Dosages and Tolerance, Use, Limitations</u> <u>Formulation(s)</u>	
/3144800	<u>Santolina</u>		
0IRACAAA #3144810 #203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
0IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u> <u>Tolerance, Use, Limitations</u>
/3117500 <u>Schefflera</u> @IRACAAA Aphids #3117510 #203.0019	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRAAABA Scales	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@ILAVAAA Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IMOAAAA Thrips	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.
@IRABAAA Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3140800	<u>Shrimp Plant</u>		
@IRACAAA \$3140810 &203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@IMOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	

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	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3118400	<u>Snapdragon</u>		
0IRACAAA 03118410 0203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
0IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0INAAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.
0IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA			Refer to Aphids for use and limitation information.

EPA Compendium of Acceptable Uses

ACEPHATE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3145000 <u>Spider Plant</u>		
@IRACAAA Aphids #3145010 #203.0019	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IMAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	

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ACEPHATE

	<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3141900	<u>Sprenger Asparagus</u>		
@IRACAAA \$3141910 \$203.0019	Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAWAAA	Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@IRAAABA	Scales		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@ILAVAAA	Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@INOAAAA	Thrips		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	
@IRABAAA	Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.	

EPA Compendium of Acceptable Uses

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
/3146100 <u>Swedish Ivy (white-edged)</u>		
@IRACAAA \$3146110 \$203.0019 Aphids	-- (3% PrL)	Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@ITBCCSA Cabbage looper		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRAWAAA Mealybugs		Foliar application to greenhouse, grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
@IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	

EPA Compendium of Acceptable Uses

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Swedish Ivy (white-edged) (continued)</u>		
@IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3127800	<u>Wandering Jew</u>	
@IRACAAA #3127810 &203.0019	Aphids	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IRAVAAA	Mealybugs	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRAAABA	Scales	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@ILAVAAA	Spider mites	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

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<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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Wandering Jew (continued)

@IMOAAAA	Thrips	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IRABAAA	Whiteflies	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
/3121300	<u>Zinnia</u>	
@IRACAAA #3121310 #203.0019	Aphids	-- (3% PrL) Foliar application to greenhouse grown plants. Apply for a period of 5 seconds per 100 square feet for light infestation and for a period of 10 seconds per 100 square feet for heavy infestation. Dosage given based on plants 2 feet in height. Adjust the dosage depending on height of foliage. Use the higher dosage for spot treatment of individual plants and localized infestation.
@IMAAAGA	Leafminers	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.
@IMAAAEA	Leafrollers	Foliar application to greenhouse grown plants.
PIRACAAA		Refer to Aphids for use and limitation information.

EPA Compendium of Acceptable Uses

ACEPHATE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Zinnia</u> (continued)		
©IRAWAAA Mealybugs		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
©IRAAABA Scales		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
©ILAVAAA Spider mites		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
©IMOAAAA Thrips		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	
©IRABAAA Whiteflies		Foliar application to greenhouse grown plants.
PIRACAAA	Refer to Aphids for use and limitation information.	

(Houseplants)

Houseplants

This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

EPA Compendium of Acceptable Uses

ACEPHATE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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DOMESTIC DWELLINGS, MEDICAL FACILITIES AND SCHOOLS

General Warnings and Limitations: Do not allow children or pets to come into contact with treated surfaces until sprays have dried. When handling acephate for use around the home (except for those to be used as a ready-to-use aerosol), wear chemical resistant gloves, long pants, and long sleeved shirt. Spray with the wind to the back and do not use when wind speeds are 10 miles per hour or more. Wash the outside of the gloves with soap and water before removing.

Domestic Dwellings (Indoor)

This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

Do not allow children on treated surfaces until spray has dried.

Hospitals (Indoor)

This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

FOREST, CHAPARRAL, NONAGRICULTURAL AND WASTELANDS

/3000000

Forest Trees

Acephate is toxic to birds. Applications may adversely affect birds in treatment areas. Do not apply directly to water or wetlands except under forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or soil-incorporate spills.

0ITAXAIC
\$3000001
\$075.0015
I9001500

Gypsy moth (larvae)

0.5-0.75 lb/A
(75% SC/S)

Foliar application. Apply in 0.5 gallon of water per acre by aircraft. Apply after foliage expansion and insect hatch have begun. Use the low dosage for suppression of light to moderate populations. Use the high dosage for heavy populations and where extended residual control is desired.

EPA Compendium of Acceptable Uses

ACEPHATE

<u>Site and Pest</u>	<u>Dosages and Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
<u>Forest Trees</u> (continued)		
#ITBUATC #3000001 #075.0015 I9001500	Western spruce budworm (larvae) 0.5 lb/A (75% SC/S)	Foliar application. Apply in 1 gallon of water per acre by helicopter. Claims for control are limited to population suppression only.
#ITBUASC #3000001 #075.0015 I9001500	Spruce budworm (larvae) 0.5 lb/A (75% SC/S)	Foliar application. Apply in 0.5 gallon of water per acre by aircraft. Claims for control are limited to population suppression only.

Wastelands

This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

COMMERCIAL ESTABLISHMENTS

(Edible Product Areas)

Commercial/Industrial/Institutional Establishments

0.02 ppm (processed food)
 This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

Food Handling Establishments

0.02 ppm (processed food)
 This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

Ships

0.02 ppm (processed food)
 This is a new use registered subsequent to the development of this entry. Refer to appropriate labeling for use information and limitations.

EPA Compendium of Acceptable Uses

ACEPHATE

<u>Site and Pest</u>	<u>Dosages and</u> <u>Formulation(s)</u>	<u>Tolerance, Use, Limitations</u>
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AERIAL, MOTHPROOFING AND TANK MIX APPLICATIONS

Aerial Application

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Refer to
AGRICULTURAL CROPS

Beans (Dried Type), Beans (Succulent, Lima), Beans (Succulent, Other than Lima), Cotton, Lettuce (Crisp-head Types), Soybeans, Tobacco (Air Cured), Tobacco (Flue Cured)

FOREST, CHAPARRAL, NONAGRICULTURAL AND WASTELANDS
Forest Trees

EPA Compendium of Acceptable Uses

ACEPHATE

Listing of Registered Pesticide Products by Formulation

&097.0001 #	<u>97% technical chemical</u> acephate (103301) 000239-02471
&075.0002 #	<u>75% formulation intermediate</u> acephate (103301) 000239-02507* *jacket currently unavailable for review
&085.0002 #	<u>85% formulation intermediate</u> acephate (103301) 000239-02447
&001.5004 #	<u>1.5% granular</u> acephate (103301) 000239-02453 000239-02472
&085.0005 #	<u>85% pelleted/tableted</u> acephate (103301) 037979-00001
&075.0015 #	<u>75% soluble concentrate/solid</u> acephate (103301) 000239-02406 000239-02418 000239-02419 000239-02427 000239-02443
&080.0015 #	<u>80% soluble concentrate/solid</u> acephate (103301) 000239-02434
&085.0015 #	<u>85% soluble concentrate/solid</u> acephate (103301) 000239-02462* *jacket currently unavailable for review
&209.4015 #	<u>9.4% soluble concentrate/liquid</u> acephate (103301) 000239-02461
&215.6015 #	<u>15.6% soluble concentrate/liquid</u> acephate (103301) 000239-02436
&297.0015 #	<u>97% soluble concentrate/liquid</u> acephate (103301) 000239-02493* 000239-02486* *jacket currently unavailable for review
&203.0019 #	<u>3% pressurized liquid</u> acephate (103301) 000499-00210

BIBGUIDE-1

GUIDE TO USE OF THIS BIBLIOGRAPHY

1. CONTENT OF BIBLIOGRAPHY. This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.
2. UNITS OF ENTRY. The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.
3. IDENTIFICATION OF ENTRIES. The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies; see paragraph 4(d)(4) below for a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier number is also to be used whenever specific reference is needed.
4. FORM OF ENTRY. In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

BIBGUIDE-2

- a. Author. Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.
- b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.
- c. Title. In some cases, it has been necessary for Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.
- d. Trailing Parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:
 - (1) Submission Date. The date of the earliest known submission appears immediately following the word "received."
 - (2) Administrative Number. The next element, immediately following the word "under," is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.
 - (3) Submitter. The third element is the submitter, following the phrase "submitted by." When authorship is defaulted to the submitter, this element is omitted.
 - (4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," standing for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

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REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting
Registrations Under the Acephate Standard

<u>MRID</u>	<u>CITATION</u>
00014219	Warnock, R.E. (1973) Metabolism of Orthene to Ortho 9006 Detected in Rats. (Unpublished study received Feb 17, 1977 under 6F1680; submitted by Chevron Chemical Co., Richmond, Calif.; CDL: 098473-C)
00014496	Tucker, B.V. (1972) Residues of Orthene and Ortho 9006 in a Marine Diatom Growing in Treated Water. (Unpublished study received Aug 7, 1972 under 239-2406; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:001571-U)
00014518	Cheng, H.M. (1974) Characterization of 14C in Liver and Urine from Rats Treated Orally with S-Methyl-14C-Orthene or S-Methyl-14C-Ortho 9006. (Unpublished study received Nov 10, 1976 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL: 095570-L)
00014532	Rich, G.J.; Leary, J.B. (1975) Residue Data Sheet: Soybeans: Test No. T-3074. (Unpublished study including test nos. T-3075 and T-3197, received Sep 10, 1975 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:195034-B)
00014533	Post, H.A.; Leary, J.B. (1975) Residue Data Sheet: Soybeans: Test No. T-3076. (Unpublished study received Sep 10, 1975 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:195034-C)
00014534	Moherek, E.A.; Leary, J.B. (1975) Residue Data Sheet: Soybeans: Test No. T-3166. (Unpublished study received Sep 10, 1975 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:195034-D)
00014540	Sakamoto, S.S.; Slagowski, J.L. (1976) Residue Data Sheet: Beans: Test No. T-3682. (Unpublished study including test nos. T-3683 and T-3756, received Jun 7, 1977 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:232596-H)
00014541	Ross, B.L.; Slagowski, J.L. (1976) Residue Data Sheet: Snapbeans: Test No. T-3743. (Unpublished study including test nos. T-3744, T-3780, T-3781..., received Jun 7, 1977 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:232596-J)
00014555	Tucker, B.V. (1974) Characterization of 14C in Tissues and Milk from Goats Fed S-Methyl-14C-Orthene or S-Methyl-14C-Ortho 9006. (Unpublished study including test no. T-3201, received Nov 10, 1976 under 239-2418; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:095572-K)

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- | <u>MRID</u> | <u>CITATION</u> |
|-------------|--|
| 00014579 | Chevron Chemical Company (1974) Orthene--and the Metabolite--Ortho 9006 Residue Analysis by Thermionic Gas Chromatography. Method RM-12A-4 dated Apr 25, 1974. (Unpublished study received Sep 21, 1976 under 239-2418; CDL:095287-E) |
| 00014635 | O'Connor, T.F.; Galletta, T.A. (1975) Environmental Impact Study of Aerially Applied Orthene on a Forest and Aquatic Ecosystem: LOTEL Report 174. (Unpublished study received Jun 30, 1975 under 239-2443; prepared by State Univ. of New York--Oswego, Lake Ontario Environmental Laboratory, submitted by Chevron Chemical Co., Richmond, Calif.; CDL:225768-A) |
| 00014637 | Bocsor, J.G.; O'Connor, T.F. (1975) Environmental Impact Study of Aerially Applied Orthene on a Forest and Aquatic Ecosystem: Impact on Aquatic Ecosystem: LOTEL Report 174. (Unpublished study received Jun 30, 1975 under 239-2443; prepared by State Univ. of New York--Oswego, Lake Ontario Environmental Laboratory, submitted by Chevron Chemical Co., Richmond, Calif.; CDL:225768-C) |
| 00014638 | Devine, J.M. (1975) Environmental Impact Study of Aerially Applied Orthene on a Forest and Aquatic Ecosystem: Persistence of Orthene Residues in the Forest and Aquatic Environment: LOTEL Report 174. (Unpublished study received Jun 30, 1975 under 239-2443; prepared by State Univ. of New York--Oswego, Lake Ontario Environmental Laboratory, submitted by Chevron Chemical Co., Richmond, Calif.; CDL:225768-D) |
| 00014639 | Bart, J.; Streckewald, T.; Peakall, D. (1975) Environmental Impact Study of Aerially Applied Orthene on a Forest and Aquatic Ecosystem: Impact on Birds: LOTEL Report 174. (Unpublished study received Jun 30, 1975 under 239-2443; prepared by State Univ. of New York--Oswego, Lake Ontario Environmental Laboratory, submitted by Chevron Chemical Co., Richmond, Calif.; CDL:225768-E) |
| 00014642 | Moore, R.B. (1975) Environmental Impact Study of Aerially Applied Orthene on a Forest and Aquatic Ecosystem: Effects of Orthene on Soil Microorganisms: LOTEL Report 174. (Unpublished study received Jun 30, 1975 under 239-2443; prepared by State Univ. of New York--Oswego, Lake Ontario Environmental Laboratory, submitted by Chevron Chemical Co., Richmond, Calif.; CDL:225768-H) |
| 00014655 | Bledsoe, M.E.; Cooper, D.; Witherspoon, B., Jr.; et al. (1979) Orthene (Acephate) Insecticide: Food Residue Evaluations of a Food Service Establishment (McDonalds Restaurants and Winn Dixie Foods)--Spot Application. (Unpublished study including test nos. T-4658, T-4670, T-4659, received Apr 17, 1979 under 239-2464; submitted by Chevron Chemical Co., Richmond, Calif.; CDL: 238179-C) |

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<u>MRID</u>	<u>CITATION</u>
00014656	Bledsoe, M.E.; Cooper, D.; Slagowski, J.L. (1979) Orthene (Acephate) Insecticide: Food Residue Evaluations of a Manufacturing Establishment (Pet Bakery and Sophie Mae Candy Corp.)--Spot Application. (Unpublished study including test nos. T-4660 and T-4661, received Apr 17, 1979 under 239-2464; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:238179-D)
00014657	Bledsoe, M.E.; Slagowski, J.L. (1979) Orthene (Acephate) Insecticide: Food Residue Evaluations of a Processing Establishment (Creamery, Univ. of Georgia)--Spot Application. (Unpublished study including test no. T-4663, received Apr 17, 1979 under 239-2464; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:238179-E)
00014658	Bledsoe, M.E.; Wright, C.; Slagowski, J.L. (1979) Orthene (Acephate) Insecticide: Food Residue Evaluations of a Processing Establishment (Creamery, N.C.S.U.)--Spot Application. (Unpublished study including test no. T-4662, received Apr 17, 1979 under 239-2464; prepared in cooperation with North Carolina State Univ., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:238179-F)
00014659	Elliott, E.J.; Leary, J.B. (1978) Residue Analysis of Acephate and Methamidophos in Crops, Soil, Water and Milk. Method RM-12A-5 dated Jan 25, 1978. (Unpublished study received Apr 17, 1979 under 239-2464; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:238179-G)
00014675	Cavalli, R.D. (1970) Acute Oral Toxicity of Ortho RE 12,420: SOCO 127/III:39. (Unpublished study received Jun 21, 1972 under 239-EX-61; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-F)
00014681	Cavalli, R.D. (1970) Acute Dermal Toxicity of RE 12,420: SOCO 134/III:35. (Unpublished study received Jun 21, 1972 under 239-EX-61; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-L)
00014682	Narcisse, J.K.; Cavalli, R.D. (1972) The Skin Irritation Potential of Orthene 75S: SOCAL 314/VI:137. (Unpublished study received Jun 21, 1972 under 239-EX-61; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-M)
00014683	Kruke, V.M.; Narcisse, J.K.; Cavalli, R.D. (1972) Acute Inhalation Toxicity of Orthene 75S: SOCAL 315/IX:62. (Unpublished study received Jun 21, 1972 under 239-EX-61; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-N)

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<u>MRID</u>	<u>CITATION</u>
00014686	Narcisse, J.K.; Cavalli, R.D. (1971) Eye Irritation Potential of Orthene Technical, Orthene 75S (CC-2153), and Orthene 75S (CC-2152): SOCAL 273/VI:107. (Unpublished study received Jun 21, 1972 under 239-EX-61; submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-Q)
00014695	Haley, S. (1971) Report to Chevron Chemical Company, Ortho Division: Teratogenic Study with Orthene Technical in Albino Rats: IBT No. B190. (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Industrial Bio-Test Laboratories, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-Z)
00014699	Hartke, K. (1971) Twelve-Month Status Report to Chevron Chemical Company, Ortho Division: Two-Year Chronic Oral Toxicity Study with RE 12,420 in Beagle Dogs: IBT No. C8732. (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Industrial Bio-Test Laboratories, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-AD)
00014700	Mastalski, K.; Jenkins, D.H. (1970) Report to Chevron Chemical Company, Ortho Division: Acute Oral Toxicity Study with RE 12,420 Technical in Mallard Ducks: IBT No. J9110. (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Industrial Bio-Test Laboratories, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-AE)
00014701	Mastalski, K.; Jenkins, D.H. (1970) Report to Chevron Chemical Company, Ortho Division: Acute Oral Toxicity Study with RE 12,420 Technical in Ringneck Pheasants: IBT No. J9110. (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Industrial Bio-Test Laboratories, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-AF)
00014705	Hutchinson, C. (1970) Bioassay Report: Acute Toxicity of RE-12420 to Three Species of Freshwater Fish. (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Bionomics, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL: 223505-AJ)
00014711	Sleight, B.H., III (19??) Bioassay Report: Acute Toxicity of Orthene (R) (SX-257) to the Brown Shrimp (<i>Penaeus aztecus</i>). (Unpublished study received Jun 21, 1972 under 239-EX-61; prepared by Bionomics, Inc., submitted by Chevron Chemical Co., Richmond, Calif.; CDL:223505-AP)

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<u>MRID</u>	<u>CITATION</u>
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FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET		EPA REGISTRATION NO.
PRODUCT NAME		
APPLICANT'S NAME		DATE GUIDANCE DOCUMENT ISSUED
With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:		
☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:		
☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:		
NAME OF OTHER REGISTRANT		
☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:		
☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):		
☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)		
REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

CERTIFICATION OF ATTEMPT TO ENTER INTO AN AGREEMENT WITH OTHER REGISTRANTS. FOR DEVELOPMENT OF DATA		
<i>(To qualify, certify ALL four items)</i>		
1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:	GUIDANCE DOCUMENT DATE	
	ACTIVE INGREDIENT	
NAME OF FIRM	EPA COMPANY NUMBER	
(This firm or group of firms is referred to below as "my firm".)		
2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:		
3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):		
NAME OF FIRM	DATE OF OFFER	
However, none of those firm(s) accepted my offer.		
4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.		
TYPED NAME	SIGNATURE	DATE

PRODUCT SPECIFIC DATA REPORT

EPA Reg. No. _____ Date _____

Guidance Document for _____

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submit- ting Data (At- tached)	
\$158.120 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk- density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submit- ting Data (At- tached)	
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric break- down voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral toxicity, rat				
81-2	Acute dermal toxicity, rabbit				
81-3	Acute inhalation, toxicity, rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitiza- tion				

GENERIC DATA EXEMPTION STATEMENT

EPA Product Registration Number: _____

Registrant's Name and Address: _____

As an authorized representative of the registrant of the product identified above, I certify that:

(1) I have read and am familiar with the terms of the Notice from EPA dated _____ concerning a requirement for submission of "generic" data on the active ingredient _____ named under FIFRA Section 3(c)(2)(B).

(2) My firm requests that EPA not suspend the registration of our product, despite our lack of intent to submit the generic data in question, on the grounds that the product contains the active ingredient solely as the result of the incorporation into the product of another product which contains that active ingredient, which is registered under FIFRA Section 3, and which is purchased by us from another producer.

(3) An accurate Confidential Statement of Formula(CSF) for the above-identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the subject active ingredient in my firm's product, or

The CSF dated _____ on file with EPA is complete, current and accurate and contains the information requested on the current CSF Form No. 8570-4. The registered source(s) of the above named active ingredient in my product(s) is/are _____ and their registration number(s) is/are _____.

My firm will apply for an amendment to the registration prior to changing the source of the active ingredient in our product.

(4) I understand, and agree on behalf of my firm, that if at any time any portion of this Statement is no longer true, or if my firm fails to comply with the undertakings made in this Statement, my firm's product's registration may be suspended under FIFRA Section 3(c)(2)(B).

(5) I further understand that if my firm is granted a generic data exemption for the product, my firm relies on the efforts of other persons to provide the Agency with the required generic data. If the registrant(s) who have committed to generate and submit the required data fail to take appropriate steps to meet requirements or are no longer in compliance with this Notice's data requirements, the Agency will consider that both they and my firm are not in compliance and will normally initiate proceedings to suspend the registrations of my firm's product(s) and their product(s), unless my firm commits to submit and submits the required data in the specified time frame. I understand that, in such cases, the Agency generally will not grant a time extension for submitting the data.

Registrant's authorized representative: _____
(Signature)

Dated: _____
(Typed)